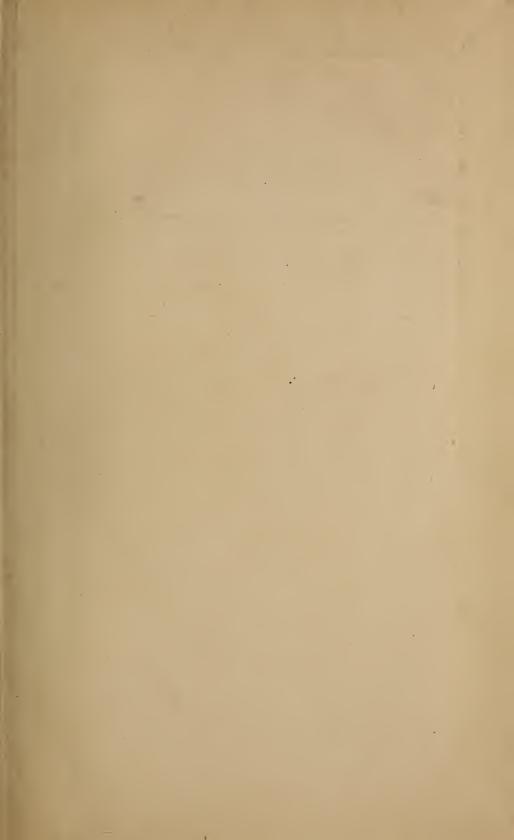




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OFFICE OF NAVAL INTELLIGENCE.

WAR NOTES NO. III.

INFORMATION FROM ABROAD.

SKETCHES

FROM THE

SPANISH-AMERICAN WAR.

BY

COMMANDER J.....

TRANSLATED FROM THE GERMAN.





OFFICE OF NAVAL INTELLIGENCE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1899.



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WAR NOTES NO. III.

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SKETCHES

FROM THE

SPANISH-AMERICAN WAR.

BY

COMMANDER J.....

Hermann Jacobson.

TRANSLATED FROM THE GERMAN.



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INTRODUCTORY.

During the recent war the German protected cruiser *Geier*, Commander Jacobsen, was stationed in the West Indies, in the vicinity of Cuba, and was permitted to pass in and out of the blockaded ports. There has lately appeared in the Marine-Rundschau, of Berlin, an official publication, a series of "Sketches from the Spanish-American War, by Commander J...." Their translation complete is given in this number of the War Notes.

RICHARDSON CLOVER, Commander, U. S. N., Chief Intelligence Officer.

NAVY DEPARTMENT, January 16, 1899.

Approved:

A. S. Crowninshield, Chief of Bureau of Navigation.



SKETCHES FROM THE SPANISH-AMERICAN WAR.

By Commander J

[Translated from the Marine-Rundschau, October, November, and December, 1898.]

The following considerations constitute the opinions of the author as acquired by him on the scene of war. He wishes to call special attention to the fact that until authentic data are available as to the strength of the two opponents in the different battles, the tactical situations and intentions, and the losses in personnel and material, the reports can be but incomplete. Nevertheless it will be desirable, even without awaiting official statements, which may not be published for years by the two belligerent parties, to sift the confused mass of material which has come to us through the newspapers and to try and describe the most important operations, at least approximately, as they have taken place. To that end I have partly made use of reports of Germans who were eye witnesses of the events. It is hardly necessary to emphasize the fact that the author has observed the strictest impartiality in his estimates of the situation. He has the same high regard for Spanish and Americans.

I. THE CAUSE OF THE WAR.

1. Much has been said and written about the cause of the war; but, even at the risk of offering nothing new, I believe I ought not to avoid entering into this question, in order to make the sketch complete.

As early as 1890 Mahan's sharp eye discerned what course the polities of his country ought to follow, and in vigorous language he pointed out that course to his nation, from a military standpoint, in his essay entitled "The United States looking Outward," and in 1893 in "The Isthmus and Sea Power." But not only strategic interests, commercial interests also, play a powerful part in this historical drama. Almost nine-tenths of all the sugar from Cuba is already going to the American market. If America succeeds in getting Cuba into her hands, either by autonomy or by annexation, it will insure an immense advantage to the American market and drive all other kinds of sugar (Germany is interested to the extent of many million marks) entirely out of America. Moreover, only a small part of Cuba is as yet being cultivated, and there are good prospects for harvesting from this beautiful country immense wealth in sugar and tobacco. Upon calm consideration it is therefore not astonishing

that the Government of the United States, pressed by the wishes of the people and by speculators having only their own interests in view, should finally have yielded and resolved to lay aside the peaceable attributes of commerce and industry and take the sword in hand. It should further be mentioned that the *Maine* affair threw the last spark into the powder barrel, and that the conduct of American officials at Havana toward the Spanish officials subsequently added further fuel to the flame.

The United States of America has done what other nations in its place might perhaps have accomplished long ago. According to the old adage that a war arises out of the needs of nations, the Union has taken advantage of the opportunity to secure for herself the first place in the West Indies.

2. Very different from the United States, the power of the Spanish Empire, which at one time ruled the world, has been gradually undermined. The flourishing colonies of Cuba, Puerto Rico, the Philippines, etc., have suffered severely during the last few years from fanatic conflicts between the inhabitants and Government troops as a result of the injudicious policy followed in the government and treatment of the former. Owing to the corruptibility of the officials, fostered by the merchants, the actual revenues from the colonies never reached the hands of the Spanish Government. The principle of the Spanish to compensate themselves first of all out of the rich profits of the country has brought about the catastrophe. It was precipitated by the fact that repeated changes in the highest positions were approved by the Government at Madrid, which necessitated not only a change in the majority of the lower officials, but entailed an entirely new system of oppression and systematic robbing of the inhabitants. When the Government at last realized the true state of affairs it was already too late. Blanco, the last Captain-General and governor of Cuba, as well as Martinez Campos, are well known as men of unimpeachable character. But although General Blanco had an intimate knowledge of Cuban conditions and enjoyed great popularity, he did not succeed in stopping the rolling ball. Steadily it was approaching the abyss, and even the autonomy proclaimed by the Government could not save it from the catastrophe. That catastrophe was the war with the United States. The Spanish, it is true, consider it an entirely unwarranted interference with rights that have been theirs for centuries and an act of violence on the part of a neighboring nation. But that is a characteristic of the Spanish nature and will serve to explain subsequent situations during the war. Even up to the very last day Spain thought it utterly impossible that war could break out with the United States. This is proved by the conditions in Cuba immediately after the sending of the ultimatum by the United States and the rejection of the same by the Spanish Government.

If the Spanish had not been so blinded, and had had eyes for what was going on in their immediate vicinity and in the country of their powerful neighbors during the last few years, they could not have hesitated to set aside their pride, and even to give up their right to the colonies. The United States would have paid Spain a handsome sum for the Atlantic colonies. The Spanish army, which had been fighting for years with great valor and under endless privations, would have honorably returned home, the Spanish merchants would have continued their business under safe protection, and the purchase price would have helped the mother country in her financial troubles. That would have been practical. But fate and the obstinacy, or rather the pride, of the Spanish willed differently. ball keeps on rolling, and nothing will stop it until the Spanish power is deprived of its colonies and, utterly broken, without any prospect for the future, retires to its exhausted mother country. But that will not prevent the people from proudly raising their heads and exclaiming: "We have defended our honor and have fought trusting in our just cause. Ours is the glory!"

3. Thus the struggle for existence is ever the same, even as between modern nations. And each country which, by reason of its commerce and industry, is entitled to a voice in the politics of the world, should learn a serious lesson from this struggle between capital and antiquated heroism. Germany, above all, should never forget that nothing but a naval force will keep her safe from adversaries—a naval force strong enough to guarantee, or at least not to preclude, success under all possible circumstances.

II. THE BELLIGERENT PARTIES.

- 4. I will not go into particulars as to the formation and strength of the belligerent parties, as this work is not intended to discuss the course of the whole war, but merely to select a few important and interesting events. Besides, the reader will have an opportunity of gaining information on these points by many other discussions on the subject. There has lately appeared in the Marine-Rundschau a review on the events of the Spanish-American war, giving the strength of both parties, together with a discussion by Rear-Admiral Plüddeman, which is especially well adapted for that purpose. I shall take the liberty, however, of inserting a few remarks as to my personal observations while on the scene of war.
- 5. As the United States of North America does not constitute a military nation and has troubled itself very little about the organization of militia and volunteers, it would not be proper to make the same requirements of American soldiers that we are in the habit of making of our soldiers in Europe. Preparatory training need not be looked for, except in the case of regular troops, and even

there such training in time of peace is very defective. The companies of militia and volunteers are drilled for a short time; officers and men become acquainted with each other, and as soon as an officer is able to lead his company or division and the men have learned to handle their guns, which is at most four weeks, the troops are considered ready for war.

This system naturally precludes the exercising together of large bodies consisting of several regiments. First of all, trained officers are lacking for that purpose, and besides, it is not deemed necessary. These troops do not fight, like European armies, in close ranks, but rather on the order of guerrilla warfare. It will be readily understood that under such circumstances there can be no question of great discipline under fire or in camp on the part of the men, nor of high tactical conceptions and corresponding leadership on the part of the officers. It is very praiseworthy, therefore, that with such primitive means such great results were attained as evidenced, for instance, by the capitulation of Santiago. As for the individual qualities of the American soldier, he is brave, too impetuous perhaps, and as long as there is fighting to be done and the hardships are not too great he is easily guided. A few volunteer regiments fought with considerable valor. But not in that respect alone have they shown military efficiency, but also in the manner in which they have endured fatigues in the extremely unfavorable climate. I am probably not mistaken in the assumption that the good results attained by some of the volunteer regiments are partly due to the circumstance that outdoor sport is carried on with great zeal in the United States. Polo, football, athletic exercises in running, walking, and jumping, tennis, bicycling, rowing, etc., are excellent preparations for military service, because they harden the body and strengthen self-confidence. And if the volunteers further know how to handle their guns and are good marksmen, which is also included among the sports, they have very nearly all the qualities which the Americans require of their soldiers.

6. The United States Navy has been diligently at work ever since the war of the rebellion, 1861 to 1865, and has put to profit the lessons derived therefrom. That the American naval officers are intelligent and energetic as well as brave and self-possessed leaders, and the American sailors cool-headed and good marksmen, was demonstrated by many examples during the above-mentioned war. The naval battle between the *Kearsarge* and *Alabama*, such deeds as Farragut's at Mobile, will never be forgotten and go to prove that the first foundation for a warlike and efficient navy—an able personnel inured to the sea—was in existence. Nor does the Union need fear a comparison with other nations as far as matériel is concerned. Since the year 1888 it has been the endeavor of the Navy Department to take the construction of ships, armor plate, and ordnance into its own hands,

so as to render itself entirely independent of other countries in that respect. The increase of the fleet has kept pace with such efforts. The battle ships Iowa, Indiana, Oregon, and Texas possess all the requirements of modern ships. Their heavy artillery is unusally strong, and the medium and light artillery consists of rapid-fire guns in larger numbers. The new armored cruisers New York and Brooklyn are fast and powerful ships, entirely on a level with the same class of cruisers in England and France. It can not be denied that a certain weakness regarding the personnel lies in the fact that so many different nationalities are represented on board; but I believe this circumstance is not of very great weight. Europeans are too much inclined to see everything only with their own eyes and judge matters according to their own usages. On board of a ship, where very strict laws prevail, especially in time of war, it can not be difficult, even among mixed nationalities, to maintain the necessary discipline as long as the officers have a correct understanding of how to handle the crews, and that faculty the American naval officers do possess, as has already been stated. Moreover, the reports of the Naval War College at Newport show that it is the endeavor of the Navy Department to have the officers gain also the necessary knowledge of tactical and strategic questions. During the last few years fleet maneuvers have taken place, the training of the crews has been carried on in a systematic manner, and, finally, target practice has been given the importance which is absolutely necessary for the attainment of the final end, namely, the annihilation of the enemy in war. I do not want to be misunderstood and do not mean to give the impression that the American Navy is above all censure and should be taken as a model in every respect. Not at all. Many weaknesses have come to light everywhere. I will only call to mind the taking off of the armor plates of the Iowa, several faulty gun constructions, which are withheld for publication. And the boilers were probably not free from objections either. But in what navy are such defects not found? It is therefore deserving of sincere praise that the Navy, immediately after the breaking out of hostilities, was ready for service with all the ships in commission and has continued such service successfully for several months. Furthermore, the vessels of the merchant marine which were required for the blockade were fitted out and armed with rapid-fire guns in a very short space of time. This latter circumstance especially might well serve as an example to several other navies.

7. As compared with the United States, Spain has a large regular army. But when we remember that so many colonies have to be defended and that the struggles with the insurgents, which have been going on for years, and the hardships connected therewith, have claimed many victims, the importance of this army shrinks considerably. It should further be remembered that the troops in Cuba and

Puerto Rico are distributed along the coasts for protection and that communications between them and concentration of these troops by railway are possible only in few places. Hence it can hardly be said that the Spanish troops are superior to the American fighting forces as far as strength is concerned. As to their military qualities, the Spanish soldiers are highly thought of everywhere. They are very brave, of great power of endurance, always sober, and extremely frugal. The officers present a good military appearance, but their education is said to be superficial. Their patriotism and readiness to sacrifice themselves can not be questioned. Moreover, officers and men have become inured to warfare through their fights with the insurgents and are acquainted with the difficult topography of the country. Outside of the regular army volunteer regiments have been organized everywhere. To see those people of all conditions and ages devote themselves indefatigably to the duties of their new calling, after their regular day's work is done, can not fail to arouse a feeling of admiration. But, on the other hand, it is questionable whether the volunteers, when it comes to actual fighting, will prove efficient. In the first place, their equipments are very defective, and, besides, their training is not sufficient to fit them for war. It may be stated as a general thing—and this applies to the regular troops as well—that the training is not adapted to war purposes. I witnessed, for instance, a drill of coast artillery where the movements of loading and firing were practiced. Projectiles, cartridges, etc., were lacking at the drill. The guns were not aimed, there was no sighting. That was one day before an actual bombardment occurred at that place. It is very evident that such gun crews can not do very efficient work. In only a few of the coast towns did target practice take place, and then only to a very limited extent. The reason was, as I was told, that ammunition was scarce, as the service ammunition had to be reserved for the enemy. That may be true, but this should have been thought of in time of peace, and this most important preparation for war should not have been deferred to the last minute or omitted altogether.

8. The Spanish navy has never recovered since the beginning of the century, when it was completely annihilated. To illustrate, I will quote Nelson's words after a visit to Cadiz in 1793: "The Dons may know how to build beautiful ships, but they do not know how to procure men. At Cadiz they have in commission four battle ships of the first rank, very beautiful ships, but miserably manned. I am quite certain if the crews of our six boats, who are picked men, had boarded one of these ships, they could have taken it." Mahan, in his work on The Influence of Sea Power upon History, 1783 to 1812, Chapter II, has cited a number of other proofs to show the lack of seamanship on the part of the Spanish. The above-mentioned words of Nelson's are still true. A few handsome ships like the Almirante Oquendo, Vizcaya, and Infanta Maria Teresa have been incorporated into the

Spanish navy, but next to nothing has been done for the training of the personnel. Maneuvers of several fleets together were unknown, and the individual training of officers and men was limited to what is absolutely necessary. Especially as relates to target practice much has been left undone. The same thing applies to the torpedo-boat destroyers which the Spanish have secured during the last few years. The vessels were very beautiful, but no thought was taken of the manner in which they should be handled by their commanders, nor the training in tactics and torpedo launching. As to the condition of the ships generally, I will state, among other things, that the boilers of three cruisers of the same class, the Reina Mercedes, Alfonso XII, and Reina Cristina, were in such bad condition as to completely disable the vessels, so that they could be utilized only for harbor defense. There are several other points which also show carelessness in the training of the personnel as well as equipment of the ships, and to which I will again refer in the course of this work.

III. BOMBARDMENT OF SAN JUAN DE PUERTO RICO.

9. It was on May 9, 1898, that I had an opportunity for the first time of visiting the scene of war; that was at San Juan de Puerto Rico. The first thing that caught my eye was a proclamation by the Governor-General Macias. As this proclamation shows the enthusiasm and patriotism of which the Spaniard is capable to such a high degree, I give below a translation of the same:

SAN JUAN, April 23, 1898.

INHABITANTS OF PUERTO RICO:

The day of trial, the hour of great decisions and great deeds of heroism has arrived. The Republic of the United States, trusting in her powerful resources and relying on the impunity with which she has so far been able to foster the insurrection of the Cubans, has resolved in her Congress upon armed intervention in the island of Cuba. The Republic has opened hostilities and has trampled under foot the rights of Spain and the moral sentiment of the whole civilized world. This is a declaration of war, and in the same manner that the hostile squadrons have commenced their actions against the island of Cuba they will also direct them against Puerto Rico; but here they will surely be shattered against the loyalty and valor of the inhabitants, who would a thousand times rather die than surrender to the usurpers.

Do not think that the mother country has abandoned us. With enthusiasm she is following our movements and will come to our rescue. The squadrons are ready for the fight. All the troops have been armed, and the same waters over which Columbus sailed with his famous ships will witness our victories. Providence will not permit that in these countries which were discovered by the Spanish nation the echo of our language should ever cease to be heard, nor that our flag should disappear from before the eye.

Inhabitants of Puerto Rico, the time for heroic deeds has come. Fight and stand firm in the consciousness of your right and of justice. On to the way!

Long live Puerto Rico, always Spanish! Long live Spain!

MACIAS.

It seems to me that more beautiful and more eloquent words could hardly be found to speak to the hearts of the people. And unless

the actions and deeds of the leaders fall far short of their words, the American invasion may be prepared to meet with strong resistance.

10. The city of San Juan is located on an island, and presents from the sea a very pretty picture with her ancient castle of Morro on one side and San Cristobal Castle on the other. The forts are powerful masonry structures. Between them rise many stately buildings, mostly barracks, hospitals, etc. The Spanish flag is waving from all the buildings, and lends a picturesque charm to the whole scene in the wonderfully bright light, with chains of mountains as a background.

Besides the old forts there are a number of new fortifications, east of Cristobal Castle as well as in the entrance of the harbor itself. The latter, which is difficult to pass even in time of peace, is closed by mines. After passing through the harbor entrance one enters a large basin close behind the city, adapted to receive a large number of ships. There is also a second bay with sufficiently deep water. With the necessary funds the harbor might be greatly improved by dredging, especially by the removal of at least a part of the shoals at Punta Larga. There are quite a number of piers offering good facilities for loading and unloading ships.

11. In consequence of the breaking out of the war with the United States commerce was, of course, at a standstill. Yet as the harbor had not been declared blockaded there were a few German and English steamers that were unloading their cargoes. A Spanish steamer also had been brought in from St. Thomas by the auxiliary cruiser Alfonso XIII. The only vessel that behaved in a suspicious manner, having apparently passed around the whole island several times and repeatedly appeared in front of San Juan, was a large ocean steamer with three smokepipes. The general opinion was that it was a United States auxiliary cruiser. The Spanish gunboats tried several times to go close up to this vessel but did not succeed, owing to her superior speed. Nothing else in the city reminded one of war. Every one was pursuing his accustomed occupations as far as this was possible under the circumstances. Almost every evening after the close of business at 5 o'clock the volunteer companies marched through the streets to the place where they were drilled. There was not much done in that line, however, at least nothing of great importance, such as target practice, instruction in topography, or field service. Usually the troops were required to take their positions in the line of defense, and soon after they would march off again. On the whole, the volunteers made a good appearance and seemed to devote themselves with great zeal to their tasks. The large number of young men among the volunteers was striking. On one occasion the Governor-General made a general inspection of the whole fortification, and at that time exercises took place with several batteries. But the exercises were carried out in a careless manner and without system. Target practice with guns, which would have been necessary above all in order to place the fortification in condition for war and to drill the person-



nel, was held neither in peace nor after the breaking out of the war. In the evening the whole population would usually repair to the plaza; several times during the week there was music there. The theater also remained open and enjoyed pretty good audiences.

12. This peaceful situation was suddenly changed when, on May 12, 1898, a part of the fleet commanded by Admiral Sampson appeared at 5 o'clock in the morning in front of San Juan, and without any further notification opened the bombardment. The Spanish complained bitterly of this surprise, which did not give them a chance to remove the sick and the women and children to places of safety, and did not give foreign representatives and warships time to leave the city or the "There are no international agreements, it is true, as to previous notice of a bombardment," says the Puerto Rico Gazette, "but in practice the custom prevails among all civilized nations to give notice of the bombardment of a city or fortification. For no Christian soldier, no civilized nation, will want to take the terrible responsibility of butchering defenseless women and children. The soldier fights against those who carry weapons, but not against the weak and the sick." The Spanish are not entirely wrong in this. A real surprise could have been of advantage to Admiral Sampson only in case it had been his intention to force the harbor. If it was simply a question of reconnoissance, he might have granted a delay of two or three hours without in any manner prejudicing the result of the bombardment. As it was, the inhabitants were rudely awakened from their sleep. The troops and volunteers at once hurried to their posts; but old men, women, and children sought their safety in the fields and roads outside of the city. A veritable emigration of fleeing people was moving along the road to Cangrejos, but all were quiet and orderly. Meanwhile the American projectiles were steadily falling upon the city and its vicinity; some passed over the city and fell into the bay.

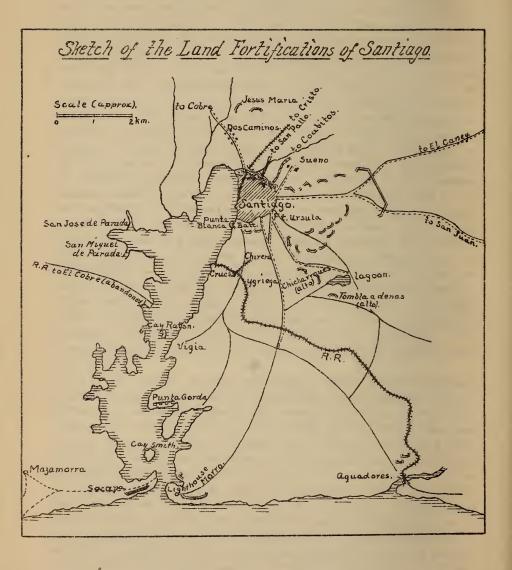
13. The American squadron was composed of nine larger ships and two torpedo-boat destroyers. Fire was opened immediately after 5 o'clock and continued until about 8.30. Four of the American ships were about two cable lengths (370 meters) north of the island of Cabras (see accompanying chart), and at equal distances from each other they were describing circles. In order to safely avoid the shallow places near the island, which they passed at a short distance, a boat had been anchored in the center of the circle. They came to within 1,500 meters of the Morro, and as each ship passed the castle she fired a broadside. Five of the American ships were fighting farther north with Cristobal Castle and the eastern batteries of Morro Castle. These ships often changed their positions. Two more ships could be discerned northeast of Santiago. Several of the American ships succeeded in passing so close to the fortifications that the nearest batteries could not fire upon them. The distance was probably 800 or 900 meters. The Spanish infantry took advantage of the opportunity to join in the battle with musket fire. This musket fire,

in connection with the fire of a battery at a greater distance, caused the American ships to withdraw. It is said that the Americans fired in all from 800 to 1,000 shots from their heavy and medium caliber guns.

14. The Spanish fortification artillery is said to have behaved well: but the batteries were unable to answer the lively fire of the American ships in the same manner. This was due to the fact, aside from the defective service of the guns, that many of them could not reach the American ships at all. On the Spanish side about 400 projectiles were fired in all. It is stated that the Spanish shots hit in several instances; but they can have done no great damage on board of the American ships, which has been confirmed by United States official statements. The guns in the fortifications are all of medium caliber, and their piercing power is not such that a single hit could be expected to cause serious injury to a modern ship. The losses on the American side were one dead and seven wounded. The number of American projectiles fired is out of proportion to the material damage caused by them. A large number of shells are said not to have exploded. Of course the fortification works were injured to some extent, but not one of the guns was put out of action. A few of the buildings visible at a great distance, like the barracks, the jail, the Hotel Inglaterra, and a few private residences, suffered from the bombardment. A large number of projectiles fell into the harbor. Some of them even reached the little town of Cataño, on the other side of the harbor. The French cruiser Amiral Rigault de Genouilly, which was lying in the harbor at the time, as also three small Spanish gunboats, received a shot in the rigging and smokepipe. The Spanish casualties were 20 dead (among them several civilians) and 20 wounded.

15. If we inquire into the advantages which Admiral Sampson expected from a bombardment of San Juan, we are probably not mistaken in the assumption that it was merely a question of reconnois-The batteries were to be brought out; Admiral Sampson wanted to ascertain their strength and efficiency and be guided thereby in determining the forces it would require for a serious bombardment of San Juan and the taking of the city by sea. not appear to have been the object of the American ships to systematically bombard the city and silence the batteries. Probably the forts served as a general target, and the number of shots that went beyond speak in favor of the assumption that it was also intended to reach the Spanish war ships which were supposed to be in the harbor. There will be other opportunities to treat of bombardments by American ships. I will therefore refrain from further remarks at this time, and only state it as my opinion that a reconnoissance of the place and there can be no question of anything else, since the American fleet withdrew-could have been made with a much smaller expenditure of ammunition.





IV. EVENTS AT AND NEAR SANTIAGO DE CUBA.

I will not attempt to give a connected account of all the happenings at and near Santiago and to set forth the reasons which inevitably led to the surrender of that place, but will confine myself to the relation of some circumstances which are not generally known, and which have come under my own observation.

1. There is a great deal of uncertainty as to the reasons why the garrisons of Guantanamo, Baracoa, etc., were included in the capitulation of Santiago. The following note of the Spanish chief of the general staff will serve to explain this matter. He says, among other things:

The garrison of Guantanamo, consisting of 7,000 men, had been on half rations since June 15 and since July 1 they had received no rations at all, and had been living on green corn and horse meat. The garrisons of Baracoa, Sagua de Tanamo, as well as of the smaller places of Palma Soriano, San Luis, Dos Caminos, Morón, Cristo, and Sougo would have been cut off and unable to retreat, and would therefore have been left to the mercy of the enemy, for the nearest place on which they could have fallen back was at least a seven days' march distant. That is the reason why these garrisons were included in the capitulation, and that of Guantanamo was included on account of the absolute lack of provisions. Hence about 10,000 men capitulated without having been at the front at all, simply owing to the peculiar circumstances.

2. In order to give a clear idea of the land fortifications of Santiago, which were considerably exaggerated in the first reports of the battles near the city, I annex a sketch of the same.

There was a line of ordinary trenches about 9 kilometers long from Dos Caminos del Cobre to Punta Blanca. I also noticed two batteries, but they were in such unfavorable positions that they could not take part in the battles of July 1 and 3. There were also wire fences and other obstructions in some places, as well as blockhouses, etc. The following data will show how few were the guns and of how inferior quality the material which the Spanish had at their disposal for the defense of the city. There were available—

Six 16-centimeter muzzle-loading guns, two of which became disabled after the first few shots, two more on July 12. It was known beforehand that these guns would not be able to fire more than a few rounds, owing to their defective mounts.

Five 12-centimeter muzzle-loading guns mounted on old carriages. On July 12 four of these were disabled, and the fifth was good for only two or three more rounds, although the charge had been reduced by one-half.

Twelve 8-centimeter muzzle-loaders, six of which were unserviceable.

Two 9-centimeter Krupp guns, one of which was dismounted and consequently disabled on July 2.

Two 7.5-centimeter Krupp guns.

Besides these, the fleet had furnished two 9-centimeter Hontoria steel guns with a few rounds, which were not fired, and two 7.5-centimeter Maxim guns, which could not be mounted, because the breech mechanism had remained on board of the ships.

Therefore, aside from the muzzle-loaders, which were of very doubtful value, the Spanish had only two 7.5-centimeter and two 9-centimeter Krupp guns. Whether the former were given a chance to be fired at all is doubtful; probably the two 9-centimeter guns were the only ones that took part in the battles of July 1 and 3. It is evident that with such defective artillery for the defense on land there was no chance in a fight with the American siege artillery, which by July 10, according to statements of American officers, consisted of 34 guns that had been installed.

3. As to the strength of the Spanish troops in the line of attack, we have the following data:

On July 1 there were in the trenches 500 sailors from the fleet; 450 men of four companies of the Provincial Battalion of Puerto Rico, No. 1; 850 of the Talavera Battalion, No. 4; 440 of the San Fernando Battalion, No. 11; 350 of three mobilized companies; 350 volunteers. In all—Sailors, 500; regulars, 1,740; irregulars, 350; volunteers, 350; total, 2,940.

These were the fighting forces. Besides, there were in the city some cavalry of the Civil Guard and some soldiers who had been assigned to other duties. Of these troops, two companies, one of the Provincial Battalion of Puerto Rico and one of the Talavera Battalion, in all not over 250 men, were defending the fortified position of San Juan. At the Socapa there were 400 men, 450 at the Morro, and 120 at Punta Gorda battery. Finally, for the defense of the line from Las Cruces to Aguadores, about 4 kilometers, there were six companies of the Cuba regiment of infantry and two companies of irregulars, in all about 550 men.

4. The battles of July 1 and 3 at El Caney and San Juan are the only ones of importance in the campaign against Santiago. The above figures show that those two positions had very inadequate forces for their defense. It is incomprehensible why the Spanish commander in chief, after the American troops had arrived and their plan of attack was known, did not at least have the troops from Morro Castle and the Socapa, where they were of no use whatever, cooperate in the defense of the threatened positions in the main line. To hold El Caney and San Juan as against the vastly superior American forces was an impossibility, although the positions were particularly well chosen and the ground very difficult for the assailants. With the same daring with which the American troops made the last assault on these positions, the Spanish defended them firmly and with coolness, firing one volley after another. On the spot they were to

defend, officers and men fell in great numbers, with that courage which has ever distinguished the Spanish soldiers. When the Americans finally succeeded in the assault, they found the trenches of San Juan filled with dead, and they buried the brave Spanish soldiers where they had fallen by simply filling up the trenches with earth. The total losses of the Spanish during the defense of El Caney and the attack on the city were:

Killed—Brig. Gen. Vara del Rey, 3 staff officers, 12 officers, and 68 men. Missing—Col. Jose Baquero, 4 officers, and 116 men. Prisoners—2 officers. Wounded—Lieutenant-General Linares, 6 staff officers, 30 officers, and 339 men.

On July 4 Colonel Escario succeeded in reaching Santiago with 3,000 men. But these troops were exhausted from the march, and the city had no provisions for them. It was therefore no wonder that the power of resistance of the garrison was not strengthened by their arrival, and that the Spanish, in view of the bombardment which they could not answer, had no recourse left but to capitulate honorably.

- 5. An unlucky star was hovering over Santiago. No one had expected an attack on this city, and the events there are another proof that in war it is the unexpected and surprising operations, if well planned and somewhat favored by luck, that usually promise success. The Spanish troops were surely not wanting in bravery and good behavior. The cause of the defeat must therefore be sought elsewhere, and in my opinion it can be explained as follows:
- (a) No thought had been taken of supplying the large cities with provisions. If not sooner, at least immediately after the breaking out of the war, the commander in chief ought to have assisted these places in the most energetic manner in laying in supplies, and where no blockade had been declared it could have been done.
- (b) It was the plan of the Spanish commander to defend the whole coast, even the smaller harbors. This necessitated a scattering of the troops. If it was not deemed expedient to concentrate all the troops at Havana, the one truly fortified place, which maneuver would have completely changed the character of the war in Cuba, a concentration of the troops should have been effected at least within the eastern province as well as the western province. Why was it that Guantanamo was garrisoned by about 7,000 men, Santiago de Cuba by 5,000, and Manzanillo by 5,000, and that at a time when Cervera's fleet had already entered Santiago Harbor? On May 28 at the latest, when the fleet had been closed in and there could no longer be any doubt as to the American plans, the troops should have been concentrated at Santiago, bringing with them all available provisions. The Americans might have taken Guantanamo and Manzanillo. That would have been of little importance from a technical point of view. The American troops would have met with energetic resistance upon

landing and in their attack upon Santiago, and it is questionable whether they would have been able to break such resistance with 17,000 men.

- (c) The Spanish troops had no field artillery, and their siege artillery was utterly unserviceable. It is due to this lack of artillery that the Americans were enabled to line up their forces without opposition from the Spanish; that they showed themselves superior to the Spanish, not in number only, in the fights against the fortified positions at El Caney and San Juan; and finally, that they were able to place their siege artillery in position without being harassed by the Spanish.
- 6. It now remains to speak of the manner in which the navy and army of both belligerent parties cooperated in joint operations, and finally, to examine minutely into the bombardments of the batteries of Morro Castle, the Socapa, and Punta Gorda. The destruction of Cervera's fleet will be treated in a separate chapter. Of course, in expeditions of this nature it is always the navy that furnishes the basis. If the control of the sea has been gained, but can not be preserved, the transport and landing of troops are dangerous enterprises, which a wise commander will always avoid. Success is also dependent on a strong and well-equipped transport and war fleet. This should be borne in mind by all nations that are engaged in colonial politics and are in possession of colonies, in order to secure new markets for the surplus production of men and merchandise. Of course the army, as the organ which is to execute the work, should be equal to the requirements made of it in a foreign country. But there is still another factor which plays an important part in such expeditions, and which should not be underestimated, and that is the cooperation of the navy and army. This factor has been lacking, not only on the American but also on the Spanish side. On the American side there was at least some agreement on important tactical questions and the navy placed itself willingly at the service of the army. But on the Spanish side the conditions were so peculiar that a cooperation of navy and army can hardly be spoken of, except in so far as marine troops took part in the battles at Santiago. Was Admiral Cervera under orders of General Linares or General Toral, or under Captain-General Blanco, or directly under the ministry of marine at Madrid? The first does not appear to have been the case, but it seems that Admiral Cervera received orders both from General Blanco and from the ministry of marine. Another example: The general de marina at San Juan de Puerto Rico was in command of the flotilla at that place; he was not under orders of Governor-General Macias, however, but under those of Admiral Mantarola, at Havana. I believe this question, which has hitherto been given little attention, had an essential share in sealing Admiral Cervera's fate. The cooperation of the navy and army is of the greatest importance, and at the great maneuvers in time of peace it should receive the same attention that other problems do.

7. The American fleet has in every respect performed its tasks in front of Santiago. The transport fleet was convoyed to the places chosen by war ships, and the landings were effected under the same protection. A systematic blockade had been established, and in this connection the main object, namely, the destruction of Cervera's fleet, was never lost sight of. Thanks to the intelligent dispositions of the commander in chief of the fleet and the skill of the American officers and crews, this object was attained with complete success. dentally the batteries of the Morro, Socapa, and Punta Gorda were bombarded by the American fleet, and these bombardments offer so much that is of interest and so many points of discussion for naval officers that I shall have to speak of them somewhat more at length. How much has been said of these bombardments! How many times have the batteries of the Morro and Socapa been placed out of action, the guns dismounted, the fortifications leveled to the ground! Batteries which did not even exist, as, for instance, Morro Castle proper and Estrella Battery, were said to have returned the galling fire, the latter completely destroyed, the former nothing but a heap of ruins! Such were the newspaper reports, of the inaccuracy of which I had an opportunity of convincing myself personally on the scene of events. Unfortunately, I am not in a position to state which of the American ships did the firing, nor how many projectiles were discharged in the different bombardments, nor the kind of projectiles and the results as to hits. But on the other hand I can give from personal observation accurate statements as to the condition of the Spanish batteries after the surrender of Santiago, and as my own observations have been supplemented by reliable information from others who were also on the scene, I am enabled to furnish sufficient material to permit an estimate of the actual conditions.

8. On the different days when the bombardments took place the following guns were available in the different batteries of the Morro, Socapa, and Punta Gorda:

Bombardment.	Date.	Morro.	Socapa.	Punta Gorda.
No.1	May 18	One 16 cm. muzzle- loader mounted on a wooden carriage; could fire only 3 shots.	Two 8 cm. muzzle- loaders.	Two 15 cm. Hontoria howitzers, muzzle- loaders.
No. 2	May 31		One 16 cm. Hontoria naval gun not yet ready for service.	Do.
No. 3 No. 4		do		Do. Same and one 16 cm. Hontoria naval gun.
No.5	June 14	do	do	Do.
No. 6	June 16	do	do	Same and one 16 cm. Hontoria naval gun.
No. 7	June 18	do	Same and two 21 cm. muzzle-loading how- itzers.	Do.
No. 8.	July 2	Same and two 21 cm. muzzle-loading how- itzers.	Same and one 21 cm.	Do.

Hence, on July 2 there were in all—

In the Morro battery: Five rifled 16-centimeter muzzle-loading bronze guns, only one of which was dismounted, and two 21-centimeter muzzle-loading howitzers which were fired on that day only.

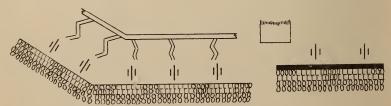
At the Socapa battery: Two 16-centimeter Hontoria naval guns from the *Reina Mercedes*. Only one of these was dismounted. Further, three 21-centimeter muzzle-loading howitzers. East of this battery, on the extreme edge of the shore, there were for the defense of the first row of mines, one 5.7-centimeter Nordenfeldt rapid-firing gun, four 3.7-centimeter Hotchkiss revolving guns, and one 1.1-centimeter Nordenfeldt machine gun, all taken from the *Reina Mercedes*.

At Punta Gorda: Two 9-centimeter bronze Krupp guns, two 15-centimeter howitzers, and two 16-centimeter Hontoria naval guns from the *Reina Mercedes*.

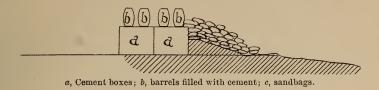
9. About three weeks after the surrender of Santiago, I visited these batteries and made the following observations:

MORRO.

- (a) Morro Castle proper, an old fort, consisting of heavy masonry standing close to the water's edge east of the harbor entrance, was not armed at all. It was used as barracks for the Spanish garrison. The outside walls had suffered considerably from the bombardments, the upper story had been completely destroyed, and in different places pieces had been shot away. The inner walls showed large and small shot-holes made by shells of different calibers, the largest of 30 centimeters.
- (b) From the houses between the castle and the light-house, about 200 meters distant, nothing had been removed. Some of them had been completely destroyed, others more or less damaged. The houses situated a little farther back and lower down had suffered no injuries. The light-house, built of iron plates about 2.5 centimeters thick, had been pierced at the front by several small-caliber shells, the largest being of 15 centimeters. The rear wall had been blown out entirely.
- (c) About 100 meters east of the light-house is the new battery, situated about 63 meters above the level of the sea. The following is a ground plan of this battery:



The guns are standing on concrete foundations built into the ground and fire over a wall erected for protection in front of them, consisting of wooden boxes filled with cement. This protection is further strengthened by sandbags placed in front of it. Between each two guns wooden barrels filled with cement have been placed on top of the wall. The spaces between them are partly filled with cement or sand. The cross section between two foundations is about as follows:



The distance between each two guns is about 6 meters.

- (d) Parallel with the front of the battery, at a distance of about 10 meters, a trench 1.5 meters deep and 60 centimeters wide has been dug. A smaller trench leads in zigzag line from each gun to this trench. For the two 21-centimeter howitzers, which were located farthest east and separated by a larger space from the 16-centimeter muzzle-loaders, there was a hole about 1.5 meters deep and 4 meters square, intended as a shelter. These shelters are said to have been frequently used by the Spanish.
- (e) The five 16-centimeter muzzle-loaders are bronze guns dating from the seventeenth and eighteenth centuries. One of these bore the dates 1668, 1718, 1769. About the middle of the present century these guns were adapted for centering by means of studs. The two 21-centimeter howitzers farthest east were rifled iron muzzle-loaders.
- (f) All of these seven guns were mounted on iron sliding carriages with front pivots, turning on rails built into the concrete. As recoil checks, small iron plates were used which, at the rear of the top carriage, were pressed firmly against the compressor bars by means of an ordinary pivot screw. For indirect elevation of the guns there was an ordinary graduated disk with a hand. There was no sight scale on the graduated arc of the carriage. All the guns were adapted to be trained directly. When the Americans took possession of the battery they did not find any tangent scales, but the American chief of the battery stated that they had been there.
- (g) Near some of the guns cartridges were lying about. A few feet west of the right-wing gun and a little to the rear was an uncovered pile of projectiles for the 16-centimeter guns. They were iron projectiles, with centering studs. The point, which was spherical in shape, contained a perforation for the fuse which had been stopped up with cotton waste. The fuses themselves could not be found. Near this pile of projectiles stood several cartridge boxes. Judging from the cartridge-bag material lying about and the powder scattered around it may be assumed that the cartridges were being made right there.

(h) In the battery itself only minor injuries could be noted. The right-wing gun had been upset by a shell, but none of the other guns nor the cement protection had received any injuries. A few projectiles had struck into the ground in front of the sand bags and destroyed a few of them. Back of the battery was lying an American 20-centimeter shell, which had not been exploded. The base fuse had been removed.

SOCAPA.

- (i) The new battery erected here is located, like that at the Morro, on the highest point of the ridge, about 400 meters west of the entrance.
- (k) The five guns installed here are in a straight line—the three 21-centimeter howitzers in the left wing and the two 16-centimeter Hontoria naval guns in the right wing. The composition of the battery is about the same as that at the Morro, except that there are no barrels on top of the cement boxes at the 16-centimeter guns, probably so as not to restrict the angle of fire of these guns and because they are protected by a 3-centimeter shield. Immediately back of the guns is a trench of little depth connecting the gun positions with each other. The 16-centimeter guns are separated from the howitzers by a broad traverse.
- (l) The 21-centimeter howitzers are like those at the Morro. The two 16-centimeter Hontoria guns were taken from the Reina Mercedes. They are long guns of modern construction on central pivot mounts, but not rapid-fire guns. The pivot sockets are built into the concrete foundation. These guns could probably not be fired oftener than once in two minutes.
- (m) About 20 meters back of the guns was a frame house with sheet-iron roof, built partly into the ground, and protected toward the sea by a small embankment of earth. This was an ammunition magazine for the battery. It still contained a number of 16-centimeter projectiles with the necessary cartridges and powder boxes. The place was little suitable for an ammunition magazine, and it is a wonder that it was not hit.
- (n) Evidently the Americans fired more sharply at this battery than at the Morro battery, probably because it contained the only modern guns whose effects were to be feared.

One of the howitzers had received a hit of small caliber in the left side of the top carriage, but without placing the gun out of action. The shield of one of the 16-centimeter guns had been pierced from below by a 15-centimeter projectile, and the carriage had also been injured, so that the gun became unserviceable. No other damages are noticeable in the guns, but at different places shots had passed immediately in front of the guns and hit the gun protections and sandbags.

PUNTA GORDA BATTERY.

- (o) This battery was not fired upon by the Americans, although it took part in the firing on several occasions.
- 10. According to the above, the final result of the numerous bombardments was but one gun placed out of action in the Morro and one in the Socapa battery. The loss in human life was a few killed and wounded. Punta Gorda battery, the only important position in a question of forcing the harbor entrance, remained uninjured. As I have already said, I am unable to state the total number of projectiles which the American ships fired in order to attain this modest result. In any event, the number is out of proportion to the result, and has proved once more a fact well established by the history of naval wars, namely, that coast fortifications are extremely difficult to place out of action, even with an expenditure of large quantities of ammunition. The American method of firing may perhaps be susceptible of improvement—that is not for me to say. But the American naval officers may take comfort in the thought that other seafaring nations would not have done any better in their place—perhaps not so well; for no navy, with the exception of the French, has made it a point in time of peace to make the bombardment of coast fortifications, fortified cities, etc., the subject of thorough, practical study.
- 11. As for the fire of the Spanish batteries, I have read of but one case where a Spanish projectile hit an American ship. It was in a fight with the Socapa battery that the battleship Texas received a hit, probably from one of the 16-centimeter guns taken from the Reina Mercedes. The projectile struck the port side about 20 feet abaft the bow and exploded, after passing through a stanchion between decks killing one man and wounding six. The American officer who took charge of the battery at Morro Castle also told me the following amusing incident: There was a bombardment of the Morro battery at night, and one of the American ships was throwing her search light on the battery. The Spanish answered the fire part of the time. The ship with the search light was not hit, but the battleship Iowa, lying quite a distance away in the dark, was unexpectedly struck by an accidental hit from one of the Spanish howitzers. The projectile passed through the deck, entered the officers' mess-room, exploded there, and caused some minor damages to the rooms; but none of the crew were hit. But what more could be expected of the kind of guns the Spanish had at their disposal? It must surely have given the American officers who took charge of the battery a slight shock when they saw the dates 1668, 1718, etc., on the guns which they had been fighting. Part of the mediæval howitzers still had charges in them when the American officer took possession of the Morro battery. He therefore decided to fire them, which gave him an opportunity of establishing the fact that even with the greatest elevation the range was

only 800 yards! It is possible that the cartridges had suffered from humidity; but, on the other hand, it is quite as probable that this was really their greatest range. One thousand meters was not a bad performance for guns of the seventeenth and eighteenth centuries. No wonder that the Spanish could not reach the hostile ships with these guns! This will also explain why the Spanish garrisons, seeing the uselessness of their efforts, often stopped firing during the bombardments and withdrew to the trenches. It was on these occasions that the newspaper reports stated that the batteries had been silenced, when, as a matter of fact, they were uninjured and in condition to resume their "unbloody work" at any time.

12. But now another question. Did the American fleet really allow itself to be deceived by these batteries? In the beginning, perhaps. And why not? I do not hesitate to acknowledge that I had the same experience, together with several other officers. When we inquired into the nature of the batteries, we had no idea of the venerable age of those guns, but set them down as 12 and 16 centimeter guns. It is true that we did not go through a fight with the batteries, and that is the essential factor for estimating their efficiency. From observations made at the Spanish batteries I judge, as already stated, that the Socapa battery was the main objective of the Americans. They seem to have known that the only serviceable guns, namely, the 16centimeter Hontoria guns from the Reina Mercedes, had been set up there; but Morro battery, too, was fired upon quite a number of times. Would the Americans have done this if they had known what miserable guns their enemies had? Hardly. So there can be no doubt that in the beginning at least the Americans were deceived as to the strength of the foe, whom they overestimated, as is usually the case in war. Moreover, there was no occasion for the American commander of the fleet, even if the Spanish batteries had been recognized as efficient and dangerous, to attack them under prevailing circumstances. If the harbor entrance was to be forced, neither the Morro nor the Socapa battery need have been considered, because they could not sweep the narrow entrance with their guns. The Punta Gorda battery was the only one that controlled the entrance, and owing to the great distance and the difficulty of observing the fire, it was almost impossible to place this battery out of action from the sea. Then, why the bombardments of the batteries and the immense expenditure of ammunition, especially since the American commander in chief did not intend to force the entrance, but on the contrary was desirous of obstructing it, as is plainly shown by Hobson's attempt? A simple blockade, without any further attack on the fortifications, would have had exactly the same result. I can not possibly believe that the American commander in chief had nothing more in view than to harass the enemy by the numerous bombardments and reassure the home press. My idea is that Admiral Sampson, as a practical and

experienced gunner, had a very definite object in view in these bombardments. I have no proofs to offer in support of this assumption, but I have an idea that there is something in it. After the batteries had been brought out all the subsequent bombardments were nothing more or less than target practice. The admiral wanted to accustom his officers and men to sharp firing. The whole crews were made to practice at regular intervals—the commanders in the manner of handling their ships, the officers in conducting and superintending the firing, the gun captains in training and aiming, the gun and ammunition crews in serving the guns and passing the ammunition, and all these under conditions of actual war, in fights with coast batteries. When the decisive day arrived—the battle on the high sea, ship against ship—the American fleet was well prepared and able to achieve its task in a brilliant manner and in the shortest possible time.

13. Whether I am right or wrong in this assumption, whether it was a question of actual bombardments or of target practice, the final result remains the same. Even at target practice each one fires as well as he can. Therefore we are still confronted with the fact that the coast fortifications, in spite of vastly superior naval artillery and the expenditure of immense quantities of ammunition, were not placed out of action. What lessons are we to derive from this?

Aside from the forcing of harbor entrances, where the assailant must eventually expose himself for a short time to the hostile fire, cases may arise in war where it becomes necessary prior to such forcing, or for other reasons, to destroy certain forts. The history of war teaches us that this is one of the most difficult problems. It should therefore be made a subject of study in time of peace, the same as any other problem. Of the necessity of studying tactics and strategy and their practical application, everyone is convinced, from the commander in chief to the youngest lieutenant. Immense sums are being expended for coal alone in order to have the ships of the fleet pass through all manner of evolutions in tactics and strategic maneuvers. Money should also be devoted to target practice under exactly the same conditions as in actual war. For what is it that decides a naval battle? The tactics of the commander in chief of the fleet and the commanders of the different ships are certainly of some influence on the battle, but nothing more. The decision will always be dependent on the good training of officers and men for the fight and the good firing of gun captains and officers. That is what the naval battle of Santiago has once more plainly demonstrated.

V. THE BLOCKADE OF HAVANA AND CIENFUEGOS.

1. Immediately after the rejection of the Union's ultimatum by Spain, and the breaking off of diplomatic relations between the two nations, Hayana was blockaded, and later Cienfuegos.

On our way to Havana, about the middle of May, we met in the Yucatan Channel the first American war ships. They were a cruiser of the Raleigh class and a torpedo cruiser. The former, painted dark gray and stripped for service, having only a signal yard at the foretopmast, being in all other respects cleared for action, made a good appearance. A large number of the crew were standing on the upper deck and near the guns, curiously eving the foreigner who had entered the line of blockade. After the exchange of a few signals as to name, place of departure, and destination, we resumed our course for Havana. The next morning (May 17), through the veil of mist covering the shore, we had a first glimpse of the mountain at Mariel, which, by its peculiar shape, affords the sailor an excellent point of bearing. A heavy fog was still enveloping Havana, and was not dispersed until the sun rose higher in the cloudless blue sky. The first object that met our eyes was the old castle of the Morro, with the red and yellow Spanish flag waving proudly in the wind. We could distinguish the high light-house to the left of the entrance, and adjoining it a huge mass of stone walls and fortifications. Havana from the sea forms a singularly beautiful picture; but this was a time of war, and our eyes, after gazing admiringly on the magnificent panorama, turned, as though instinctively guided by the military spirit, to the long rows of fortifications visible close to the shore at the Vedado, indistinctly at first, then more and more sharply. There was much to be seen. During the short moments while we were passing by, we had to observe carefully in order to gain at least an approximate idea of the value and strength of the forts. The whole line of fortifications at the Vedado appeared to have been recently constructed. At Santa Clara and La Reina workmen could be seen strengthening and changing the original batteries. To the left of the harbor entrance, also, we could see two or three newly erected batteries extending as far as Cochima (Cojimar?).

The American blockading vessels remained at a considerable distance and were apparently composed of only a few gunboats of the Annapolis class and auxiliary cruisers (small steamers or yachts armed with a few rapid-fire guns). We were slowly approaching the harbor entrance, and with the assistance of a pilot entered the harbor, passing through the mine obstruction and the channel, which was literally lined with guns, though mostly of old designs. Great numbers of people, mostly soldiers and workmen, were crowding both sides of the entrance. Silently they were staring at our ship, and the same dismal silence also prevailed in the harbor itself. The beautiful wharves for loading and unloading steamers were empty. Only a number of workmen out of employment were sitting or lying around. A few boats were moving about in the harbor. All the others, as well as the larger sailing vessels which in time of peace are engaged in coasting trade, were at anchor in the inner harbor. The coal

depots at the other side of the harbor contained immense supplies. but at the quays and coaling piers, which are the busiest places in normal times, there was not a single vessel to be seen. Finally, when we entered the harbor proper, we saw a few Spanish warships—the cruiser Alfonso XII, torpedo gunboats Marques de la Ensenada, Nueva España, Conde de Venadito, and a number of smaller gunboats. These ships, also painted gray, stripped for service and cleared for action, made at a first glance a very good appearance, especially the large cruiser; but a second glance through glasses sufficed to convince us that the large cruiser, Alfonso XII, had no large guns on board, which caused us to infer that on the inside also everything was not as it should be (and, indeed, it appeared subsequently that the boilers were unserviceable). Close to the Alfonso XII the wreck of the Maine could be seen above the water, furnishing the key, so to speak, to the strange changes which Havana had undergone in such a short time, the warlike preparations of the garrison on the forts outside, the stillness of the harbor, the inactivity of the population, and the appearance of the Spanish warships cleared for action.

2. A walk through the streets of the city revealed the usual everyday life. Of course the traffic was not as great as in time of peace. The wealthier families—Cubans and Spaniards as well as foreigners-had left Havana in large numbers. Many beautiful houses, the former residences of these families, were now standing empty. Beggars were lying about in front of the church doors and in the main streets, among them women with half-starved little children, but not in very large numbers. Many a coin was dropped into their outstretched hands by the passers-by; but there was nothing to indicate at that time that the blockade had entailed serious results for the poorer population. Many stores in the principal streets were open. but in the majority of cases the clerks were taking it easy, either in the store or in front of it. The restaurants and cafes, on the contrary, were enjoying good patronage. The prices, of course, were higher than usual, but not extravagant; and for good pay, good dinners could be had in these restaurants. Meat was, on an average, 1.50 marks (37 cents) a pound. Eggs were particularly expensive. The general opinion was that there were sufficient provisions in the city to sustain the blockade for some length of time; but what was to become of the poorer class of the population in that event was a problem. At the restaurants the large number of uniforms was striking. They were worn by the volunteers, who were represented at the capital in particularly large numbers. A special guard of honor of volunteers had been ordered for Captain-General Blanco, and they had taken charge of the guard service at the palace. As for the military qualities of these half soldiers, they were probably not of a high character, for proper training and drilling were lacking here as well as in Puerto Rico. From the city I went to the seashore and took a look at the fortifications, especially Santa Clara and La Reina, and I could not help admiring the energy and zeal of the Spanish. Everywhere the greatest activity prevailed. From early until late work was going on at the fortifications. The old forts were being strengthened by earthworks and heavy guns mounted at Santa Clara. In some of the forts volunteers could be seen practicing at the guns until late at night; other divisions of volunteers had gathered for instruction; feverish activity everywhere, from the private to the officer and Captain-General. The latter frequently visited the forts and inspected personally the progress of the work. But in view of all this energy one may well ask, Was there not too much to be made up that had been neglected in time of peace? It is not possible to make soldiers, especially accurate and cool-headed marksmen, in a few weeks or months. That can only be done by constant practical training under able officers in time of peace.

3. On May 14 the Spanish gunboats Conde de Venadito and Nueva España had made an attack on the American blockading vessels, and as this is the only instance of initiative on the part of the Spanish ships at Havana, I will give an account of it. The Conde de Venadito is one of the older cruisers, of 1,200 tons displacement, launched in 1888, having a speed of 12 knots, armed with four 12-centimeter guns and a few light rapid-fire guns. The Nueva España is a torpedo gunboat of 600 tons, armed with two 12-centimeter guns and a few light rapidfire guns, reputed to have a speed of 18 knots, but in reality she would probably not make more than 14 knots. The 12-centimeter Hontoria guns were installed behind shields. According to the statement of a Spanish officer, these could be fired not oftener than once in No target practice had taken place. España had fired the first shot at an American war ship. Her torpedo armament consists of four Schwartzkopff torpedoes of the older type, with small explosive charge (about 25 kilograms), and two torpedo tubes. No regular exercises in torpedo launching had taken place. Both vessels have a great deal of woodwork. On the forward conning bridge is a saloon with heavy wood wainscoting, tables, chairs, etc., none of which had been removed for the fight. Both ships went out to sea at 5 o'clock p. m., followed at some distance by two small tugs. The blockading line was quite a distance from the shore, and it was about an hour before the engagement commenced. Five American vessels, probably only gunboats and auxiliary cruisers, were soon surrounding the Spanish ships, so that the latter could use their guns on both sides. The vessels approached to within 8 kilometers. A successful hit from the Spanish is said to have caused the American ships to retreat, but owing to the darkness the Spanish ships did not dare follow them, and returned to Havana at 8.30 p.m. without having been hit once. This was not very much of a success, and does

not appear to have raised the spirit of the Spanish; for, even after the harbor flotilla had been reenforced by the cruiser *Infanta Isabel*, it never again attempted an attack on the American ships, either at night or in daytime. That does not speak very highly for the initiative and spirit of enterprise on the part of the Spanish naval officers, especially as the blockading fleet consisted only of gunboats and inferior auxiliary cruisers, which later were reenforced by the large cruiser *San Francisco*. Even the latter might have been successfully attacked at night by the Spanish torpedo boats under able command and with intelligent handling of the torpedo weapon.

- 4. In order to cut off the supply of provisions from the sea the cities of Matanzas, Cardenas, and Cienfuegos, which are connected with the capital by railway, had been blockaded since the beginning of the war. Several attempts of the United States to land troops at these places were unsuccessful, owing to the inadequate means with which they were undertaken. The Americans therefore confined themselves to a few insignificant bombardments, and finally to the blockade alone. When I arrived at Cienfuegos, on June 11, I did not meet a single American vessel keeping up the blockade, either in Yucatan Channel or in front of Cienfuegos. I have subsequently been told that the American ships would often leave the harbor without any guard and then suddenly reappear at the end of a few days. I infer from this that the Americans did not handle the blockade service very strictly at Cienfuegos. The result was that several steamers were successful in running the blockade. If the Spanish Government had used some energy in securing blockade runners at the beginning of the war, or had encouraged them by premiums, Havana, as well as the other provinces of the island, could have been abundantly supplied with provisions. How little such enterprises were supported by the Spanish Government is shown by the fact that at Cienfuegos, for instance, two large steamers were lying idle during the whole period of the war, while with a little more energy they might have been of the greatest service. Besides Cienfuegos, the waters near the Isle of Pines—the town of Batabano among others—were very favorably situated for blockade runners. From suitable anchoring places in deep water, which are abundant in that vicinity, the cargoes could have been taken ashore by smaller vessels. Of course, all such matters require preparation and decisive action conditions which did not exist among the Spanish. As a matter of fact, at different times in the course of the war supplies did reach Cuba just in that manner, and that was the reason why the United States saw themselves compelled to extend the blockade from Cape Antonio to Cape Cruz, the whole territory here under discussion.
- 5. When we arrived at the entrance to Cienfuegos we noticed to the right the ruins of a light-house, which the Americans had fired upon in an unsuccessful attempt at landing. To the left of the harbor

entrance, which was now plainly visible, was a large castle in the usual Spanish style of architecture, standing on an elevation, and below it the town, which, with its white houses hidden among trees, reached down to the water's edge. The houses were mostly one-story high, with porches running all around. Some boats and small steamers were lying at the landing piers. After hoisting the necessary signals and waiting patiently we saw two Spanish gunboats approaching. We could plainly see that they had been cleared for action and were extremely suspicious, for they advanced, but very slowly. Finally, they seemed to come to the conclusion that the white ship with awnings, lying there quietly, without any warlike preparations, could have only a peaceful mission. A boat was lowered, the pilot came on board, and we ran in. The entrance is similar to that at Santiago de Cuba, and quite narrow. There is a bend to the north which makes it difficult for large ships to enter the harbor, because the current coming from several directions is usually very strong at this place, so that a ship turning slowly might easily run aground on the eastern point. Here also the indefatigable activity of the Spanish troops could be noticed. They were working energetically on new batteries, which were armed with field guns. There were mines in the entrance. Works of defense, trenches, etc., had been built in the direction of the castle. The number of regular troops was conspicuous; there appear to have been no volunteers at that place. As we passed, the soldiers stopped in their work to take a look at the ship. At one of the landing piers, at the narrowest place of the entrance, a crowd of people and regular soldiers had gathered. A band on the porch of one of the houses was playing "The Watch on the Rhine," a courtesy extended to the German ship by the Spanish commander. We steamed into the large bay and after passing several small islands and shallow places we saw before us the city of Cienfuegos. channel is narrow even here; the large bay has many shallow places, and only a narrow passage leads to the city, at which our ship cast anchor some distance from the shore. Nevertheless, the harbor of Cienfuegos is one of the best of the whole island of Cuba, and with the expenditure of the necessary funds a very fine place could be made of it. Outside of Santiago, whose commerce, owing to the inaccessibility of the country back of it, will probably never be developed to any great extent, Cienfuegos is the only good harbor on the southern coast, and has therefore probably a great future. It is also to be noted that the largest sugar factories of Cuba, which are mostly operated by American capital, are in the vicinity of Cienfuegos.

6. The small Spanish gunboats lying in the harbor were doing guard service at the entrance, relieving each other every day. Besides these the torpedo-boat cruiser *Galicia* was in the harbor. An unlucky star seems to have been over this vessel. At first it was stated that she was to be docked in order to make repairs. Afterwards she was again

pronounced seaworthy; but the fact is that she never left the harbor during the whole period of the war. There was no lack of provisions noticeable in the city. The Spanish Government had bought up the provisions and set selling prices on them. For instance, a pound of beef was only 80 pfennigs (16 cents)—certainly a low price considering that the blockade had already lasted two months. On June 13 gun fire was heard in the direction of the entrance. The Spanish gunboats went out and had a slight engagement with an American auxiliary cruiser, probably the Yankee. The gunboat Vasco Nuñez de Balboa was shot through the bow above the water line, and several of the crew were wounded. In other respects the engagement was of no importance. The following day we left Cienfuegos, spoke the American cruiser Yankee, which was on blockade service, and after stopping a few days at the Isle of Pines we shaped our course for Hayana.

7. In the morning of June 22 we came within sight of the tableland. We kept close to the shore in order to inspect the harbor of Mariel and to see how far the American blockading line extended. It was not long before the blockading ships, among them the gunboat Wilmington, which was lying close to Mariel, came in sight. There was the usual exchange of signals. A heavy thunderstorm was threatening. Morro Castle, which had been visible in indistinct outlines, disappeared behind a dark cloud. The storm came up rapidly. The flashes of lightning followed each other in quick succession, the thunder roared, and the rain was coming down in torrents with a force only possible in the Tropics. The blockading ships had vanished from sight. We could hardly see a ship's length in front of us, and the torrents of rain continued to fall, merging the lines of the sky and the sea. As we had made out Morro Castle before the storm commenced, I had the ship steer for it very slowly. Soon it commenced to clear up in the direction of the land, and while the storm continued to rage on the sea and the whole line of blockade was still enveloped in rain, we entered the harbor with the assistance of the pilot. Involuntarily the thought occurred to me, what an opportunity that would have been for a blockade runner; but the matter is not as simple as it looks. It is true that at this season of the year a heavy thunderstorm, usually about noon or in the afternoon, may be counted upon almost daily. Still the chances of being thus favored are too slim to make it advisable for a ship to attempt to run the blockade in daytime. The only real opportunity is at night. The American blockading fleet consisted of the gunboat Wilmington, two gunboats of the Annapolis class, one or two monitors and about four auxiliary cruisers, the latter partly small vessels. The ships were distributed over a line about 30 miles long, surrounding the harbor in an arc at a distance of about 120 to 140 kilometers. In my opinion it would not have been difficult for a

fast ship (15 or 16 knots would have been sufficient, since the American blockading vessels, with the exception of a few small cruisers, did not exceed 12 knots) to run the blockade at night. The requirements were that the night should be as dark as possible, the lights on board darkened, and the course shaped straight for the entrance through the middle of the blockading line. As the beacon light was kept burning all the time, there was no difficulty about steering for the entrance. The blockade runner would have had to depend entirely on her speed and maintain her course without regard to hostile projectiles. The firing of guns, including rapid-fire guns, with night sights is so difficult that hits can hardly be counted on unless the distance is very small. To approach the line of blockade by hugging the shore I consider hazardous. The vessel could not have remained entirely hidden, owing to the close formation of the line. There would have been danger, as soon as the alarm signal was given, for the blockade runner to be cut off from Havana by the blockading fleet and forced upon the shore.

- 8. Since our last visit to Havana, about a month ago, there was hardly any change noticeable in the aspect of the town and the conditions prevailing there. The harbor was empty and deserted. Two steamers, however, could be seen, of rather enterprising appearance, one of them even with two small rapid-fire guns on board. The Spanish war ships were still at anchor at the same place. There were no foreign war ships. Work on the improvement of the fortifications was still going on with the same restless activity. The volunteers continued their drills. Provisions were expensive, but the prices were held down by the Government, so as to prevent excesses on the part of the dealers. The poor were being taken care of as far as possible by the distribution of food in free kitchens and by entertainments for their benefit. The theaters were kept open. On certain days there was music in the public places. The Governor-General did all he could to keep up the spirit of the inhabitants. The rate of sickness and death was said to be hardly higher than usual. The climate at this time of the year is especially unfavorable, because the beneficial effects of the rainy season are not yet felt. Inside of the fortified region the Government had laid down so-called zonas de cultivo, which were intended for the raising of vegetables, etc., and were expected to prove of great benefit. One of the chief articles of food consisted of pineapples, which in time of peace are exported in incredible numbers, and which could now be bought in quantities for a fabulously low price.
- 9. In the forenoon of June 24, I noticed some preparations on board the Spanish steamers *Montevideo* and *San Domingo*, from which I inferred that they were about to put to sea. The time was well chosen. The moon set about 10 o'clock, and at midnight both steamers, with

all lights darkened, passed through the entrance. They were successful in eluding the American ships. I afterwards met the *Montevideo* again at Vera Cruz, with a full cargo, ready to leave the harbor at any moment; but as far as I could ascertain, the steamer, after putting to sea, preferred to return and unload her cargo again. The *San Domingo*, upon her return to Cuba, was captured by American blockading ships and run ashore near the Isle of Pines.

10. We remained at Havana until June 29. We then proceeded to Kingston and from there to Santiago de Cuba and Cienfuegos, casting anchor at the latter place on the evening of July 8. The blockade was now quite strict, as we had an opportunity to find out upon approaching Santa Cruz. At Trinidad we met the American gunboat Helena, and at Cienfuegos the cruiser Detroit, lying close to the harbor. Nevertheless, the auxiliary cruiser Reina Maria Cristina, a large, fast steamer, armed with fourteen 5-centimeter rapid-fire and several revolving guns, had succeeded in entering the harbor of Cienfuegos. Her cargo consisted of dried codfish and ham. Part of the steamer's guns and ammunition were used to reenforce the fortifications. city itself had not again been harassed by the American ships. Communication with Havana by rail was kept up, though there were frequent delays in the arrival of trains, owing to the lack of fuel. There did not appear to be any great scarcity of provisions. A proclamation by Captain-General Blanco, published in the Gaceta de la Habana, apprised the city of the catastrophe of Santiago, which was so disastrous to the Spanish.

The Spanish at Cienfuegos gained an idea that the ships had gone down with all their crews. It was not learned at that time that the ships had been run ashore and that the Americans had taken many prisoners. The heavy blow was borne with comparative equanimity. It was the general opinion that the fate of Santiago was also sealed and that then peace negotiations would be opened.

11. On July 10 the crew of the steamer Alfonso XII arrived at Cienfuegos and was transferred to the auxiliary cruiser Reina Maria Cristina. The Alfonso XII had attempted to run the blockade at Havana, keeping close to the shore, but had been compelled by the American blockading ships to run ashore at Mariel. The majority of the crew was rescued. The cargo was destroyed by the Americans, who fired upon the steamer and set her on fire. In connection with this attempt to run the blockade we seek in vain for an explanation as to why the cruisers, torpedo gunboats, and other vessels in Havana Harbor did not assist the blockade runner. The time of her arrival could have been announced by cable. It then became the duty of the Spanish warships to go out in accordance with a prearranged plan and try to divert the blockading ships. Such a maneuver would not only have raised the moral courage of the garrison, condemned to

demoralizing inactivity, but would in all probability also have been attended with success.

12. We left Cienfuegos on July 12, and after visiting Vera Cruz, again returned to Havana on August 1. The blockading fleet appeared to have drawn closer together, so that there was one ship to every 2 miles. The flag ship San Francisco was also seen this time. Few changes were noticeable in the city itself. There was not as yet an actual famine, but the poorer classes were evidently much worse off than they had been on our former visit, for the number of beggars in the streets had increased. Crowds of poor people would come alongside the ships in boats to try to get something to eat. It was a sad sight to look upon those half-starved women and emaciated little children, barely covered with miserable rags, holding out their hands imploringly and asking for alms. Everything floating around in the water was examined by these miserable people. Nothing escaped their eyes. Parings of fruit and other refuse were caught up and sucked out. The suffering was terrible, and we were powerless before it. All could not be helped, but at least a few. This scene was repeated every noon and evening. The crews gave willingly what could be spared, and more than that. Ashore, as already stated, the poor people were being taken care of as far as possible by free kitchens. Since the middle of July about 30,000 rations had been distributed in these kitchens. The health conditions were remarkably good this year. Yellow fever had not yet made its appearance, but there was typhoid fever and dysentery. The sentiment of the population, as well as of the troops, seemed to incline toward peace. A general feeling of listlessness had settled upon them since the capitulation of Santiago. "If the Americans would only attack Havana," the people would say, "they would soon find out what the garrison of the capital is made of. They would get their heads broken quick enough. But Uncle Sam is only beating about the bush. He is not going to swallow the hot morsel and burn his tongue and stomach." No wonder that the Spanish troops, condemned to inactivity, poorly fed, cut off from the whole world, and without any prospect of relief, were anxious for the end to come. And so peace was being talked of everywhere, and there was a persistent rumor that the French ambassador at Washington had been empowered to conduct peace negotiations.

13. After a cruise around Cuba, Haiti, and Puerto Rico, upon which I had started at the beginning of August, I returned to Havana for the fourth time on September 3. How different everything looked! The clouds of smoke of the blockading ships were no longer seen on the horizon. That circle of brave vessels, greedy for prey, ready every moment to pounce upon anything that came within their reach, had vanished. Our first glance was for the flag on Morro Castle. The red and yellow colors were still waving there, but there seemed to be an air of sadness and listlessness about them, as though they

were anticipating their fate of having to make way for another flag without having been conquered. The harbor entrance was animated. Many sailing vessels were going in and out. In the harbor itself German, English, and Norwegian steamers were busily engaged in loading and unloading. Alongside the custom-houses there were a number of American and Mexican sailing vessels that had brought food and wine. All the storerooms were filled with provisions of every kind. The city had awakened to new life, business houses were once more open, merchants were again at their work, the streets were full of people; yet there was an air of depression over the whole city. The one thought, what was to become of them now, seemed to have cast a spell over everything. The insurgents were lying close to the city, and many of the inhabitants of Havana went out to visit with friends or to satisfy their curiosity. Will the United States succeed in dispelling the specters they have conjured up? Will Cuba Libre triumph, or will the island be annexed to the Union? These are the questions which are now ever present.

- 14. As peace is now at hand, there is no reason why a discussion of the fortifications of Havana, which were erected or improved by the Spanish with so much skill, should be kept secret any longer. I will therefore try to give an approximate idea of the same:
- (a) The harbor entrance had been made inaccessible by several rows of mines. Along the entrance many guns had been set up which were fired through embrasures from behind thick masonry walls. All these guns were muzzle-loaders of old types. Farther inland there was a torpedo battery—two ordinary launching tubes, which had been temporarily installed on a float without any protection.
- (b) The object of the shore fortifications was partly to defend the entrance and partly to prevent landings. During the first few days after the breaking out of the war the Spanish had feared a bombardment of Havana and a landing of American troops at the Vedado, and this fear was well founded, as there was only one fortification on the Vedado, and that not entirely completed. The Americans allowed that opportunity for attacking Havana by surprise to go by without taking advantage of it, because they were themselves by no means prepared for the war and had neither troops nor transports in readiness. By dint of unremitting activity the Spanish were able in the course of the war to place the following works in good condition, part of them having been newly erected:

EAST OF THE ENTRANCE.

Battery No. 1 (permanent): Four 15-centimeter Ordonez guns; on the wings, two 5.7-centimeter Nordenfeldt rapid-fire guns.

Battery No. 2 (permanent): Two 30.5-centimeter Krupp guns; four 21-centimeter Ordoñez howitzers; two 5.7-centimeter Nordenfeldt rapid-fire guns.

Velasco battery (temporary): Three 28-centimeter Krupp guns; three 12-centimeter Hontoria naval guns; one 5.7-centimeter Nordenfeldt rapid-fire gun.

Between the latter two batteries there were three small temporary batteries, the first of which was armed with two 9-centimeter field guns and the second and third with three 12-centimeter and 15-centimeter guns, respectively.

WEST OF THE ENTRANCE.

La Punta (permanent): Two 15-centimeter Ordoñez guns.

La Reina (permanent, but considerably strengthened and newly armed): Three 16-centimeter Hontoria naval guns (from the cruiser Alfonso XII); two 25-centimeter muzzle loaders; seven 21-centimeter muzzle-loading howitzers.

Santa Clara (permanent, but considerably strengthened and newly armed): Two 30.5-centimeter Ordoñez guns; three 28-centimeter Krupp guns; four 21-centimeter howitzers. On the flank, two 5.7-centimeter Nordenfeldt rapid-fire guns and three 15-centimeter guns.

Battery No. 3 (permanent): Four 21-centimeter Ordoñez howitzers; two 15-centimeter Ordoñez guns; two 24-centimeter Ordoñez guns.

Battery No. 4 (temporary): Three 16-centimeter Hontoria naval guns (from cruiser $Alfonso\ XII$); four 15-centimeter Ordoñez guns; two 5.7-centimeter Nordenfeldt rapid-fire guns.

Besides these, temporary stands had been erected on the west wing for field guns.

(c) The shore fortifications had their bases of support in some of the larger forts, like El Principe and Atares forts, forming the inner belt around the city. An outer belt had also been established at a distance of about 10 kilometers from the city. The fortifications on the outer belt consisted of a large number of infantry sites protected by artificial obstructions, stakes, wire fences, etc. For each two or three of these sites there were more extensive works with gun stands. Thus, all the important points had been connected by one long line of fortifications. The defense of the coast east of battery No. 1 near Cochima (Cojimar?) was suprisingly weak. Batteries Nos. 1 and 2 are trained toward the sea; only one 4.7-centimeter rapid-fire gun covers the flank. The fortifications on this part of the coast consist of only one gun site with two field guns. It would seem as though a landing with a sufficient force of troops, assisted by the fleet, might have had a chance of success. Fortunately for the city the fortifications were not put to a severe test. Aside from a few shots at the beginning of the blockade, about twenty shots were fired at the American cruiser San Francisco toward the end of the war, namely, on August 12. The ship did not answer the fire. A Spanish projectile hit the stern of the American cruiser as she was steaming away, but without causing serious damage or loss of human life.

15. In order to show in a comprehensive form the steamers which during the war ran the blockade of Cuba, I give in the following table the names of the steamers and the different harbors they entered, together with their respective cargoes:

Harbor.	Name of ship.	Date.	Cargo.		
Cienfuegos	Steamer Montserrat Steamer Adula	Apr. 26 June 17	War material. 50 barrels flour, 50 barrels corn, 50 sacks rice. 10 tubs butter, 15 barrels pork, 15		
			barrels beef, 10 barrels hard tack, 6 sacks beaus, 5 sacks pease.		
Do	Steamer Reina Maria Cris-	June 22	1,000 boxes bacon, 50 barrels bacon sides, 600 barrels codfish, 200 sacks beans.		
Santiago de Cuba a.	Steamer Polaria	May 7	300 sacks barley, 14,000 sacks rice.		
Caibarien α	Steamer Alava Steamer Franklin	July 4	2,500 sacks flour, 6 barrels codfish. 2,495 sacks flour, 3,056 sacks corn, 200		
Manzanillo	Steamer Anita	b June 18	sacks spices, 333 sacks potatoes. Small quantities flour, rice, and meat.		
Sagua la Grande a	Steamer Fritjof Nansen	July 3	Small quantities potatoes, onions, meat, and rice.		
Matanzas	Steamer Montserrat	July 29	8,000 sacks rice, 805 sacks beans, 600 sacks pease, 500 sacks flour, 1,399 boxes bacon, 213 boxes codfish, a large quantity of smoked meat, 15 barrels drugs.		
Cayo Frances a	Steamer Franklin	July 31	3,495 sacks flour, 1,350 sacks corn, 500 sacks rice, 165 sacks beans.		
Batabano	Coast steamer Arturo	<i>b</i> June 13	800 sacks corn, 150 sacks flour. 20 sacks pease, 100 sacks beans, 80 cans lard.		
Do	Coast steamer Sara	$b\mathrm{June}24$	35 boxes flour, 20 half boxes and 2,490 sacks corn.		
	Bark Tres Hermanos		Beans, flour, and corn.		
D0	do	July 14	156 tubs bacon, 200 sacks rice, 160 sacks corn, 129 barrels flour, 60 boxes meat,		
Do	Coast steamer Victoria	July 13	65 boxes condensed milk. 237 sacks corn, 20 sacks pease, 100 sacks flour, 200 sacks beans, 5 sacks lentils, 12 boxes salt meat, 120 cans, 2 barrels, and 4 tubs lard.		
Do	Steamer Villaverde	$b\mathrm{J}\mathrm{une}23$	4,785 sacks flour, pease, coffee, beans,		
Do	Brig Bujia	July 26	corn, and rice. 6 barrels lard, 438 sacks rice, 22 sacks beans, 200 sacks flour.		
Nuevitas a	Steamer Saffi	May 20	125 sacks pease, 95 sacks rice, 185 barrels		
			wine, 650 sacks salt, 50 boxes oil, 5 boxes cheese, garlic, hard-tack, and		
Do	Steamer Franklin	June 11	pepper. 2,266 boxes flour, 284 sacks rice. 2,593 sacks beans, 96 sacks spices, 50 sacks		
Do	Steamer Chateau Lafitte	June 17	pease, 697 sacks corn, 72 sacks coffee. 50 barrels codfish, 6 barrels sonp, 3,885 barrels flour, 9,295 sacks flour, 5,000		
La Isabella (sea- port of Sagua la Grande). a	Steamer Regulus	July 19	sacks rice. 6,573 barrels flour, 1,000 sacks wheat, 4,000 sacks corn, 450 boxes cauned meat, 1,000 barrels pork, 500 barrels hard-tack, 30 boxes groceries, 1 box		
San Cayetano	Steamer Pralrono	bAug. 8	quinine. 400 sacks flour, 100 sacks rice, 100 sacks beans, 200 sacks corn, 272 tmbs lard, 20 baskets garlic, 10 baskets onions.		

The above demonstrates once more how difficult it is to maintain a blockade even under the most favorable circumstances, as in this case, where the Spanish navy did not make a single attempt to shake off the blockading ships. I am unable to say what part of the provisions mentioned in the foregoing table went to Havana; probably

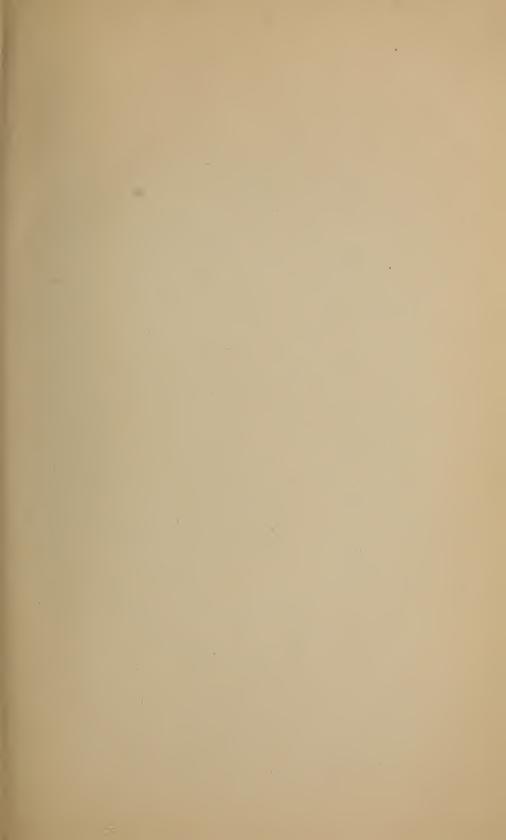
a These ports were never declared to be blockaded.
b These ports were not declared to have been blockaded until after these dates.

Only four of the above-mentioned ports were included in the President's proclamation declaring certain ports to be blockaded, viz, Cienfuegos and Matanzas on and after April 22, 1898, and Manzanillo and Batabano on and after June 27, 1898.

Out of the 22 instances given in the table of vessels entering Cuban ports during the war, there were but 9 of these which ran the blockade.

all those that were landed at Batabano, but I have information from reliable sources that on August 12 the military administration of Havana had provisions on hand for three months longer, outside of what the blockade runners had brought into the country and what was hidden away in the houses of the city. One can therefore understand the indignation of Captain General Blanco when he heard that the peace protocol had been signed. But of what use would have been a further resistance on the part of the Spanish garrison? The United States Government only needed to make the blockade more rigid. That would necessarily have sealed the fate of Havana sooner or later. A fortress in the ocean, cut off from its mother country, can be rescued only with the assistance of the navy. The enemy who has control of the sea need only wait patiently until the ripe fruit drops into his lap.

The lessons to be derived from the foregoing are evident and need no further explanation. May our colonies be spared the fate of Havana.





OFFICE OF NAVAL INTELLIGENCE.

WAR NOTES NO. IV.

INFORMATION FROM ABROAD.

SKETCHES

FROM THE

SPANISH-AMERICAN WAR.

BY

COMMANDER J.....

TRANSLATED FROM THE GERMAN.



OFFICE OF NAVAL INTELLIGENCE.

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INTRODUCTORY.

Sketches from the naval battle of Santiago and occupation of Puerto Rico, by Commander Jacobsen, of the German protected cruiser *Geier*, given in this number of the War Notes, are a continuation of Sketches from the Spanish-American War, by the same officer, given in War Notes No. III.

RICHARDSON CLOVER, Commander, U. S. N., Chief Intelligence Officer.

NAVY DEPARTMENT, March 27, 1899.

Approved:

A. S. CROWNINSHIELD, Rear-Admiral, U. S. N.,

Chief of Bureau of Navigation.



SKETCHES FROM THE SPANISH-AMERICAN WAR.

By Commander J.

[Translated from the Marine-Rundschau, January and February, 1899—Concluded.]

VI. THE NAVAL BATTLE OF SANTIAGO.

1. I have no official sources at my disposal from which to give an account of the battle. The reports of Admiral Sampson and the commanders of the American ships, as well as the reports on the condition of the Spanish vessels after the battle and on the positions and movements of all ships during the battle were published in the New York Herald. From the Spanish side nothing has been published except a short report of Admiral Cervera to Captain General Blanco and an article entitled "Admiral Cervera's fleet" published in the Revista General de Marina. Under these circumstances it is inevitable that errors and omissions will occur in the account of the battle; but, on the whole, it will probably give an approximately correct idea.

Paragraphs 2-13, inclusive, have not been translated as they were from United States publications containing:

- (1) Descriptions of the United States and Spanish vessels engaged in the battle.
- (2) Chart showing the positions of the ships during the battle at different times between 9.30 a.m. and 1.15 p.m. from the records of the United States Naval Board appointed to plot such positions.
- (3) Description of the engagement compiled from official reports of the commanders of the United States vessels.
- (4) Condition of Spanish vessels after the battle, as shown by the United States board appointed to examine them.
- 14. With Admiral Sampson's permission the officers of the *Geier* inspected the Spanish ships on August 12, more than a month after the battle, at which time the following observations were made:
- (a) The ships, after coming out of the harbor entrance on a westerly course, turned to starboard and ran ashore in small coves, where they probably saw the best chance for their crews to reach the shore through the surf.
- (b) The reason for beaching the ships can probably be found in the fact that the fires which broke out on board after the first American

hits could not be controlled by the crews, who had lost their heads under the hail of hostile projectiles. All three of the ships present pictures of the most frightful ruin, chiefly due to the explosions and the conflagrations, which did not reach their full intensity until after the ships had been run ashore. All the woodwork and combustible material had been burned. The following will give an idea of the intense heat that must have prevailed:

The iron deck beams and other horizontal iron parts were very much warped; the bearings of the connecting rods had been melted; the iron masts had been partly melted where they pass through the upper deck; the brass frames of the ports between decks had been partly melted, and the ports themselves were found on deck converted into large lumps of glass; parts of the rapid-fire mounts had been melted, the lead in the small caliber and machine-gun projectiles had melted and run out, and the casings had been reduced to ashes.

(c) Besides the conflagrations and subsequent explosions, the ships sustained such severe leaks when running ashore that it will be impossible to float them again, with the exception of the *Maria Teresa*, which is now being attempted to be hauled off.¹

All the masts of the ships had fallen aft and had been hurled to the deck with their tops. Only the mainmast of the *Maria Teresa* was left standing, which is an evidence that she ran ashore at less speed, which is further shown by the fact that she sustained less leaks than the other ships. The mainmast of the *Oquendo* had fallen to starboard and broken in two upon striking the railing and one part gone overboard.

- (d) Nothing definite could be ascertained as to the boats that had been on board. There was nothing left but the wrecks of two iron steam launches hanging in the warped and partly broken davits on board of each of the ships.
- (e) The engines were probably intact in all of the ships at the time they ran ashore, for they were apparently running at great speed—at least the *Oquendo* and the *Vizcaya*.

The machinery installation on board the ships was about as follows:

α. The two main engines and six main boilers are located in five water-tight compartments below the protective deck. Above them, between decks, and protected by lateral coal bunkers, are two large auxiliary boilers of at least 12 tons capacity, and many auxiliary engines, conspicuous among which is a large and powerful centrifugal bilge pump with a discharge pipe of about 300 mm. diameter. The protective deck, extending from the stem to the after torpedo room, is slightly vaulted forward of the boiler rooms, and pierced above the boiler and engine rooms for the passage of smokestack casings and engine skylight, but is protected at this place by a strong glacis, rising

¹ In the meantime the Maria Teresa has been floated by American wreckers, but she sank on her way to Norfolk.—ED. "RUNDSCHAU."

at an angle of about 30 degrees from the inner bunker walls. The openings in the engine skylight and smokestack casings were protected by iron gratings. The protection by lateral coal bunkers extended through boiler and engine rooms, reaching to the battery deck, a height of 3.5 meters. Alongside the engine rooms in each of the bunkers to port and starboard forward and starboard aft was a room for engine supplies, while to port aft was a well-equipped workshop, extending nearly to the ship's side. In the workshop was a small 1-cylinder steam engine for driving transmission gear, actuating a turning lathe, a boring engine, a grindstone, and very strong shears, also five vises. The supply rooms appear to have been well equipped, but everything seems to have been stored in wooden closets and on wooden shelves, for all the tools were found scattered on the floor in wild confusion.

β. There was a surprising number of rough castings, especially of stuffing boxes. Spare parts for the main engines were found suspended in the engine skylight; covers, pistons, and slide-valve faces for low-pressure cylinders on the bulkheads. To the smokestack casings were secured three connecting rods, eccentric rods, etc.

y. Nothing could be noticed of any provisions having been made for the protection of the machinery installations except the iron gratings. In the Almirante Oquendo coal sacks were found near the auxiliary boiler, but their object could not be determined, the boiler room being flooded. The steam pipes above the protective deck do not appear to have been disconnected before the battle. Valves leading to auxiliary engines, which were not used during the fight (such as ash-hoisting machinery, pumps for auxiliary boilers, etc.), were found open. The centrifugal bilge pump above mentioned also appeared to have been in gear. The bulkhead doors above the protective deck were all open. They could not have been opened subsequently, since all the bulkheads had been warped by the heat, but the bolts were intact.

(f) At the time of our inspection nothing could be ascertained regarding the injuries in the engine rooms, because they were all under water almost up to the protective deck. It was learned from an American engineer engaged in the wrecking operations of the Infanta Maria Teresa that no dead bodies had been found in the engine and boiler rooms, and hence it is probable that there have been no material injuries to the boilers and steam pipes. All the bunker bulkheads and connecting doors are said to have been open and all the fires of the boilers lighted.

(g) The damages above the protective deck had been caused chiefly by the conflagrations, but also by hits from the enemy's secondary battery. The inadequacy of the lateral protection of the engine rooms was striking. The supply rooms and workshops had been hit a number of times. Shots which entered the coal did not go through. Only one hit was noticed in the auxiliary piping above the protective deck of

the *Infanta Maria Teresa*. The shot had gone clear through the pipe without ripping it open, from which it may be inferred that there was no steam in it at the time.

- (h) On the gun and upper decks the smokestack casings had been perforated in several places, also the smokestacks themselves. Apparently no measures had been taken for closing up these shot holes. The electric wiring had been struck in many places. Shot holes were also noticeable in the speaking tubes. It was not possible, owing to the complete destruction by fire, to make any further investigation of the means of communication and command.
- (i) The three ships inspected had all their guns on board. The only ones that could not be found were the two 7-centimeter rapid-fire boat guns, but pivots had been provided on both sides of the stern, where these two guns were apparently intended to be installed for use against torpedo boat attacks at night.
- (k) From the slight losses which the American ships claim to have sustained, it may be judged that the training of the Spanish gun crews must have been very inadequate. This is not surprising, in view of the statement of one of the Spanish naval officers to the effect that no target practice is held in Spain in time of peace. Other circumstances also give evidence of very inefficient handling of the guns. The turrets and their guns, with the exception of the forward turret of the Almirante Oquendo, were found entirely intact. The loading apparatus for the 28 centimeter guns (Whitworth, Manchester, 1895) was of the hydraulic order, and the loading time was about two minutes. 14-centimeter rapid-fire guns also were probably not used to their best advantage, owing to want of experience. There was evidently no lack of ammunition, for near some of the guns a number of cartridges were found, and some of the guns were still loaded, but had not been fired. To what circumstance it is due that the breechblocks of two of the guns were found lying in the rear of the guns with their pivot bolts torn off, could not be explained. Perhaps this may also be attributed to inefficient handling of the projectiles.
- (l) Only the port side of the ships was fired upon. The starboard side shows but a few holes, where shots have passed out. Where the course of projectiles could be traced it was usually ranging from port aft to starboard forward. The destructive effect of the American projectiles is mainly due to the conflagrations caused by them. Aside from a shot through one of the turret roofs, no hits were observed in any of the armored turrets. Neither have any projectiles pierced the side armor, which shows no injuries. Only indentations are noticeable in places where projectiles have struck the armor. Projectiles of 15 centimeters and larger calibers that had hit the ship had in many instances gone out through the other side, making holes about 1 meter square, but without bursting. As the same observation has been made in the bombardments of Santiago and San Juan, it may be assumed

that it is due to the uncertain functioning of the base fuse. It is not probable that the Americans used armor-piercing shell, as fragments of projectiles of different sizes found in the vicinity show that explosive shell and not nonexplosive shell were used. Projectiles which had hit smokestacks and masts had gone clear through, making only small, round or oblong shot holes. Hits of small-caliber projectiles (5.7-centimeter) could be noticed in large numbers, and this was corroborated by the statement of an American officer to the effect that they were used in great quantities.

(m) The question whether the Spanish had any intention of making use of the torpedo weapon may probably be answered in the negative. The torpedo armaments of the ships, although including a large number of tubes, were so defective that there could hardly be any chance of success as against the powerful American ships. The armaments consisted of two bow, four broadside, and two stern tubes, all above water and of antiquated design, with large cartridges, band-brakes, etc., all located above the armored deck and entirely unprotected. In a very primitive manner the tubes had been partly protected by grate bars lashed with chains.

(n) The projectiles were 35-centimeter Schwartzkopff torpedoes with large depth-regulating apparatus.

No war-heads were to be found, with a single exception. According to the statement of an American petty officer, the war-heads had been left at Santiago, where they were to be used in connection with the mine obstructions. It is true that this does not agree with the fact that a torpedo head exploded on board the *Almirante Oquendo*. It is possible, however, that the ships retained one or two war-heads to be used in case of necessity as against rams, since the broadside tubes were adapted to be turned in any direction, or perhaps it was the commander's wish to take a war-head along.

- (o) The following points support the assumption that it was not the intention to make use of the torpedo weapon:
- α . Not one of the tubes still in existence was loaded, and all the tubes were closed. In the tubes destroyed by shots or otherwise no remnants of torpedoes were found.
- β. The remaining torpedoes, almost without exception, were lying in their places along the ship's side. No torpedoes were found lying back of the tubes, with the exception of the bow tubes of the *Almirante Oquendo*.
- y. There was no pressure in any of the flasks. This is shown by the fact that the flasks were entirely uninjured, although the heat had partly melted the tailpieces of the torpedoes.
- δ . In several of the torpedoes lying on top, the protecting cap for the depth-regulating apparatus had not been taken off, while it is necessary to remove it in order to put on the war heads.
 - $\epsilon_{\text{-}}$ In a few of the torpedoes the sinking valves had been put in place,

but in most of them they were still found soldered, with connecting links raised.

ζ. The tubes for filling the launching cartridges were not connected, and only on the *Almirante Oquendo* was the powder charge in readiness.

A. INFANTA MARIA TERESA.

- (p) This was the flagship, and the first one to be beached, about 6 miles from the entrance of Santiago. The ship's bow was lying only a little higher than usual above the waters line, the stern a little lower; otherwise upright. She evidently ran ashore at slow speed, for aside from the fact that there were only small leakages in the bottom, no boiler explosion took place, nor was the mainmast thrown down. In other respects also her injuries are much less than those of the other ships. The ammunition rooms appear to have been previously flooded, and therefore did not explode.
- (q) This ship shows very few hits from the hostile guns, especially few of small caliber as compared with the others. While all the woodwork has been burned, the same as on the other ships, little damage has been sustained by the ship's hull. The ship has therefore been floated by the Americans.1 All leaks had been stopped up, the ship pumped out, and then hauled off by steam tugs about 6 feet toward the sea. In this operation she sprang another leak aft and was again filled with water. On the day of our inspection this leak was being stopped up and the water pumped out by means of four steam pumps. Heavy articles, such as anchors, chains, etc., had been transferred to one of the wrecking steamers. While the ship was dry the two forward boilers had been set to work, and with them the auxiliary piping and several bilge pumps. One of the workmen stated that the engines had been found intact. The engine rooms could not be visited, because they were under water up to the tops of the cylinders. It could only be ascertained that the engine skylight had not been damaged.
- (r) Three hits of large caliber—probably 20-centimeter—were observed:
- α. A shell had entered the after torpedo room close above the water line, had passed through a heavy stanchion and a lateral bulkhead, and out through the starboard side, where it had torn a hole about 1 meter square. There were no indications to show that the projectile had burst. The shot hole on the starboard side was slightly forward of and about 1 meter higher than that on the port side.
- β . Another projectile had passed through the whole length of the compartment above this torpedo room and out through the starboard side, likewise without exploding.
- y. A heavy shell must have exploded at the upper conning bridge, for the top of the conning tower, without having been perforated, showed large oblong scars, caused by heavy explosive fragments.

¹ She sank again on her way to the United States.—Ed. "RUNDSCHAU."

(s) A 15-centimeter shell had struck the port bow and loosened the reenforcement ring of the hawse hole. No injuries from explosive fragments were noticed here.

Another 15-centimeter shell had perforated the 3-centimeter shield of a 14-centimeter rapid-fire gun on the port side. Fragments had destroyed the shaft of the elevating gear and both hand wheels. Others had perforated the forward smokestack casing. This hit appears to have annihilated the whole crew of this gun, near which six charred bodies were found.

Another 15 centimeter shell had damaged the after smokestack, after passing through the empty part of a coal bunker, which was still filled with coal to within 1 meter of the ceiling.

- (t) Very few small-caliber hits were noticed, only 6 in the ship's sides, 2 in the forward, and 5 in the after smokestack, though one of the latter may perhaps have been caused by a 15-centimeter projectile. Near the stern three indentations were noticeable in the side armor, probably caused by 5.7-centimeter projectiles which, striking at a very small angle, had glanced off.
 - (u) Further observations made are as follows:

All the breechblocks of the rapid-fire guns and parts of the mechananism of the revolving guns had been thrown overboard by the Spaniards. Whether the turret guns had also been rendered unserviceable could not be ascertained. In any event, they had not been injured by hostile projectiles nor by the conflagrations. The gun sights were also missing. Inside the armored turrets no damages of any kind were noticeable. Even the paint had hardly suffered from the heat. In the after-turret gun a projectile had been rammed home, but apparently the cartridge had not been entered. The conning tower was not injured, only burned on the inside.

(v) The torpedo-launching tubes and torpedoes had been less damaged by shots and fire than in the other ships. The complete remnants of twenty-four torpedoes were found, with the exception of the war heads. Only a few practice heads were found.

B. ALMIRANTE OQUENDO.

(w) This ship sustained very severe leaks when running aground. She lies over to port, with the bow about 1 meter light and the stern 1½ meters deep. The ship appeared to have her back broken in the region of the foremast. The rapid-fire ammunition room just forward of the after turret had exploded. Amidships everything above this room had been hurled down. The protective deck was heaved up and wrenched from the sides. The deck beams throughout were badly warped, and both sides of the ship showed large holes, through which the water was washing in. The second explosion had taken place in the forward rapid-fire ammunition room. The effects were about the same as aft. On one side they were still further increased by the

explosion of a torpedo war head in the forward broadside torpedo room. Here the aperture in the ship's side had reached the dimensions of two meters in width and about 5 meters in length, its lower edge being formed by the armor.

- (x) The Almirante Oquendo had suffered more than either of the other ships from hostile projectiles.
- α A 15 to 20 centimeter shell had torn a piece about 20 centimeters wide and 50 centimeters long from the upper edge of the gun port in the top of the forward 28-centimeter turret and burst inside. A number of small holes, caused by shell fragments, covering a space of about 1 meter square, were noticeable in the top of the turret. There were no other traces of shell fragments. The bore was empty, the breechblock closed, and a shell was found in the rear of the gun in position for loading. Back of the gun and to the left of it two charred bodies were found, and to the right a mass of human remains that had apparently formed two more bodies. A head was found lying on the platform under the gun. Where the turret commander had been standing another charred body was found lying on its back, with the gun sights under it. The gun itself appeared to have sustained no injuries.
- β . A shell, probably of 20 centimeter caliber, had passed through the ship's side in the engine workshop, where it had demolished the transmission shaft, the boring engine, and the turning lathe; then through the engine skylight and exploded on the other side of the latter, in the engine supply room.
- γ . A heavy projectile had passed through the smokestack and out through the starboard side without having bursted in the ship.
- δ. About 25 meters from the stern a heavy shell had struck the 'tween-decks and passed through it. On the starboard side inboard, several small holes were visible, apparantly from fragments of this shell.
- ε. A shell, probably of 15 centimeter caliber, had hit the shield of the fourth 14 centimeter rapid-fire gun. The irregular holes noticeable in the forward smokestacks are probably attributable to fragments of this shell. The wheels of the revolving and elevating gear of this gun had also been damaged.
- ζ . A 15-centimeter shell had passed through the port coal bunker and out through the starboard bunker.
- η . A 14-centimeter rapid-fire gun on the starboard side had been hit on the left side by a 5.7-centimeter shell ranging forward. The projectile with solid point had passed entirely through the forward hoop and penetrated the bore to the depth of 2 centimeters. There were no splinters from the gun, but the displaced metal had been forced out at the edges, which is a proof of its great tenacity. The point of the projectile had been broken off and was lying near the gun. The hole is about 15 centimeters long and at the widest place 5 centimeters wide.
 - 9. In the whole port side about forty small-caliber hits were counted,

most of them amidships. The smokestacks had also been hit several times by small projectiles.

2. Other observations made on board the Almirante Oquendo are as follows:

The armor had not been injured by any hits. In two of the rapidfire guns the sights were found set for ranges of 13 and 14 kilometers, and in the 5.7-centimeter after-port gun at 10 kilometers. The sights of all the guns, with the exception of the revolving guns, had traveling eyepieces. None of the sights were found set for short ranges. Some of the 14-centimeter rapid-fire breechblocks were missing, while some of the guns were found completely loaded.

(y) The torpedo tube in which a torpedo had exploded had been torn into small fragments, the largest of which were a guiding bar and a hinged door. The torpedoes secured to the ship's side had also been destroyed, with the exception of the flasks, which had been hurled several meters from their positions. The bulkhead 'tween-decks near the place of the explosion showed traces of the same. Pieces about 4 centimeters square had passed entirely through it, while still smaller pieces had penetrated it to the depth of several millimeters. The conning tower had remained intact.

In the forward torpedo room torpedoes were found near each of the tubes, but without war heads on them. The port tube had the depth-regulating apparatus in readiness. The outer cap of one of the tubes was still open. The tubes had been bent by the grounding of the ship. They were not loaded.

C. VIZCAYA.

(z) The Vizcaya, like the Almirante Oquendo, is so seriously damaged that there is no prospect of hauling her off. This ship also ran ashore at great speed, and the keel was apparently broken in two, for with each sea the stern would rise and fall with loud creaking and groaning. The vessel was lying almost upright with only a small list to port. All the rooms below the protective deck, and the after rooms above it, were flooded.

Near the forward turret an explosion had taken place in the lower part of the ship, probably in one of the ammunition rooms. The wood part of the upper deck had been burned, and the iron plating torn open, and through the gap could be seen a chaos of brokon anchor gear, capstans, chains, cement, rubbish, torpedo tubes, etc. The hull is about equally damaged on both sides.

α. The protective deck had been ripped open and the plating folded back on the starboard side, between the forward smokestack and the ship's side, probably as the result of a boiler explosion. The pivot sockets of the 14-centimeter rapid-fire guns had been torn away and the guns bent back to such an extent that the bores were pointing upward almost vertically.

- β . Hot coal gas and smoke issuing from an open bunker hole showed that the coal was still burning.
- γ . The *Vizcaya* has suffered little from hostile fire. A 15 to 20 centimeter shell had struck the forward broadside topedo room, dismounted the port tube, and had apparently killed a number of men. Several charred bodies were found scattered over the whole room.

A 20-centimeter shell, ranging forward, had passed through the ship's side, through a locker amidships near the second 14-centimeter rapid-fire gun, and through a lateral bulkhead abaft of the forward turret; then, striking the turret, had glanced off without causing any impression, and exploded on the starboard side.

A heavy shell had entered the gun deck forward of the after turret and passed out through the starboard side without bursting in the ship.

Besides these three large-caliber hits, about twelve smaller ones could be noticed in the broadside, most of them of 4.7 and 5.7 centimeter caliber; also five hits in the forward and one in the after smokestack.

Other observations were made as follows:

The conning tower had not been damaged by projectiles, but completely burnt out on the inside. The conning bridge was totally demolished. Two charred bodies were found still lying in the tower, also several bodies or parts of bodies in different places on the iron gun deck. Many rapid-fire cartridges, either whole or in part, were found scattered about; also a quantity of exploded small-arm ammunition.

The breechblocks of two 14-centimeter rapid-fire guns were found near the guns. In one of these guns the projectile had been jammed near the muzzle. The whole cartridge was found in one of the bores. The breech was open.

- δ . The torpedoes had not been made ready for use and the tubes were not loaded.
- 15. If we compare the observations made by the officers of the *Geier* as to the number of hits with the results of the examination made immediately after the battle, we obtain the following figures:

Hits from—	Maria Teresa.	Oquendo.	Vizcaya.	Colon.
10-cm. projectile 12.7-cm. projectile 20-cm. projectile 30.53 cm. projectile	3) 777	5 5 III 3 IV	2 6 4 III	4
Secondary battery	20 XV	42 XL	11 XVIII	

In the above table the Arabic figures designate the results of the United States Board, while the Roman figures represent the observations made at the time of our inspection in August last. It will be

noticed that there is not much discrepancy in the figures. Of course, observations made so long after the action can not lay claim to absolute accuracy, especially as our sojourn on board was necessarily short. The traces of many hits have been partly obliterated by the powerful action of the surf, especially in the superstructures, of which hardly anything is left standing. It may therefore be inferred that the figures of the United States Board are more nearly correct than ours; but even they probably fall short of the actual results.

16. The *Brooklyn* was hit about twenty times by shells and several times by fragments and machine gun projectiles. The cruiser sustained no serious injuries of any kind. The *Iowa* is said to have been hit twice in the bow, just above the water line, by 15 centimeter shells and seven times by small-caliber projectiles. The *Texas* and *Indiana* were hit twice by light projectiles without sustaining serious injuries.

17. In order to be able to realize the complete defeat of the Spanish fleet it is necessary to call clearly to mind its situation in Santiago Harbor. Cervera had entered the harbor on May 19. As early as May 27 five hostile cruisers with several gunboats and auxiliary cruisers were observed in front of the harbor, and there was no longer any doubt that the whole American battle fleet was blockading the harbor. Then followed the bombardments of Morro Castle and the Socapa, several shells falling into the bay, and the Spanish ships retreated closer to the city. On June 3 the Merrimae was sunk, but the entrance remained unobstructed. On June 22 occurred the landing of the American troops, who on July 1 attacked the fortifications of the city. Five hundred men of the landing corps of the Spanish ships took part in the defense and are said to have fought very valiantly.

18. The Government authorities at Havana were very anxious to have the fleet leave the harbor, in order to remove the main object of the attack upon Santiago; for the ships had been the cause of the blockade and of the attack on the unprepared city. Hence it was imperative that the ships should leave. It is probable that ever since the middle of June this had been suggested to Admiral Cervera by the authorities at Havana; but the Admiral appears to have declared that it was impossible to make an attempt to run the blockade at night. Whether direct orders were finally given to leave the harbor under all circumstances I have not been able to ascertain.

19. Admiral Cervera was in a very difficult position. He was expected to act in some manner. He did not dare make the attempt at night, and so he decided to go out with his fleet in broad daylight. The whole crew fell a victim to this fatal decision. Instructions for the order of the sortie and the taking of the western course had been previously issued by the chief of the fleet. According to the Revista General de Marina, Vol. XI, No. 3, August, 1898, the Admiral was entirely convinced of the impossibility of defeating the enemy or of reaching another Cuban harbor, even if he should succeed in steaming right

through the hostile fleet. It is to this feeling of helplessness and impotence as against the American naval forces more than to anything else that I attribute the defeat. The Spanish ships had spent a month and a half in the harbor without even attempting to attack the blockading fleet when a favorable opportunity presented itself, or even of harassing it. The two torpedo boat destroyers were not used for the purpose for which they were intended. This inactivity and lack of initiative must have had a very demoralizing effect on the officers and men. If we add to this the certain knowledge that the opposing forces were much stronger, it will be readily understood that the idea of general flight after coming out of the harbor entrance was the only acceptable one, especially in view of the possibility of beaching the ships, thereby rendering them unserviceable, and eventually rescuing the crews. From the very moment that this feeling of impotence took possession of the Spanish and led to the above reflections their fate, psychologically speaking, was sealed. We do not mean to disparage their valor and tenacity in the midst of the hostile fire; but, on the other hand, it is quite natural that the Admiral, seeing that everything was happening as he had foreseen, was the one who set the example of running his ship ashore. All the other commanders followed this example.

20. On the American side the situation was just the reverse. Admiral Sampson's fleet was fully conscious of its power. The blockade was being conducted in accordance with carefully prepared plans, as were also the arrangements in case of the enemy's attempt to escape. Frequent engagements with the Spanish forts had given commanders and crews that calm and assurance in the handling of their weapons which guarantees success. The long blockade service, exhausting and monotonous, hardly interrupted by any action on the part of the Spanish, had strung the nerves to the highest pitch, and everybody was anxious for the end to come. Suddenly the enemy attempts to escape. All the passions that had been smoldering under the ashes break forth. The welcome opportunity for settling accounts with the enemy had come at last, and with a wild rush the American ships fell upon their victims. At the beginning the American fire, owing to the excitement of the personnel and the great distances, was probably not very affective; but when the Spanish admiral turned to westward and the other ships followed him the moral superiority of the Americans reasserted itself. The commanders, calm and cool-headed, had their ships follow the same course, and the Americans, having every advantage on their side, recommenced the fire on the fleeing ships, which soon resulted in their total annihilation.

21. I have already spoken of the lack of training of the Spanish crews, the neglect of gun and torpedo target practice, the inadequate education of the commanders of the ships and torpedo boat destroyers. It is mainly due to these deficiencies that the defeat was hastened and that the American ships sustained so few losses. Furthermore, there can be no excuse for having allowed the cruiser *Cristobal Colon* to

leave Spain without her heavy armament. It has also been stated that the rapid-fire guns of this cruiser were unserviceable, so that she was really completely defenseless. The training of the engine personnel also was totally unreliable, which is not surprising in view of the fact that the Spanish ships, as a rule, are not sent out on extensive cruises. The bottoms of the Spanish ships had not been cleaned for a long time, and as they had been lying in Santiago Harbor for a month and a half they were considerably fouled. Thus the cruisers Maria Teresa, Oquendo, and Vizcaya, which in all official books are credited with 18.5 knots speed, went into the battle with a speed of from 10 to 12 knots at most, and the Cristobal Colon, which is the latest ship and was to run 20 knots, hardly attained a speed of 13.5. Under these circumstances, in every way unfavorable for the Spanish, whose crews were insufficiently trained and physically and morally enervated by long inactivity, whose ships were inferior in number, speed, and fighting efficiency, it is no wonder that the victory of the Americans was easy and paid for with insignificant sacrifices.

22. There was only one chance for the success of the sortie. It should have been made at night in scattered formation. After a personal investigation of the locality, it is my opinion that it is entirely practicable for a fleet to leave Santiago Harbor at night. The wreck of the Merrimac did not constitute an obstruction. It is true that Admiral Sampson's report on the night blockade states that the light-ships were lying from 1 to 2 miles from Morro Castle, according to the state of the atmosphere, and that they lighted up the channel for half a mile inside. Even the best search light, however, does not reach farther than 1 mile. Therefore the illumination could not have been very effective. Moreover, the shore batteries, by opening fire upon the light-ships, could have compelled them to change their positions; but, strange to say, this was never done. The dark nights at the time of the new moon about the middle of June would have been best suited for the enterprise. Besides the four vessels of the fleet, two large Spanish merchant vessels lying in Santiago Harbor might have been taken out in order to deceive the enemy. The six vessels, with lights darkened, should have followed schother out of the harbor entrance, in predetermined order, as fast as possible. They should then have steered different courses, previously determined, with orders not to fight except when compelled to do so by the immediate vicinity of a hostile ship or when there was no possibility of escaping the enemy in the darkness. A rendezvous should have been fixed for the next day, where the ships that succeeded in escaping were to assemble.

23. If the fleet did not dare attempt a night sortie and was nevertheless compelled to leave the harbor in obedience to orders, then the ships should have been headed straight at the enemy. All weapons, including the torpedo and the ram, should have been used. A bold attack in close formation was the only chance of success against the

superior hostile fighting forces, who would hardly have found time to form their lines.

- 24. I shall not attempt to discuss at length all the lessons which may be derived from the battle, because this would lead too far. I will only enumerate them, and confine myself to dwelling a little more fully on those which are of the greatest importance for practical service.
 - (a) Abolition of all woodwork.
 - (b) No unprotected torpedo tubes.
 - (c) Protection for all gun crews against shell fire.
 - (d) Protection of the fire-extinguishing apparatus against shell fire.
- (e) Smokeless powder; greatest possible simplicity in the service of the guns and greatest possible rapidity of fire.
 - (f) Good speed of the ships under normal conditions.
 - (g) Thorough training of the crews in all branches of the service.
- 25. The last two are the most important. A ship may show very brilliant results at the trial trip and be credited with the greatest speed in the different books on the navies of all nations; but for the officer who is to command the ship in battle this is not a criterion from which to judge of her efficiency. Frequent trial trips under full steam, making it possible to discover and cure defects of the machinery in time of peace, and familiarizing the personnel with the functioning of the vessel in all its details, can alone give the commander an idea of what he may expect of his ship in battle. Extensive cruises at war speed should also be made, in order that the personnel may get an idea of how much more will be required in time of war. This is especially important in the tropics, where the great heat materially affects the physical endurance and efficiency of the boiler and engine personnel.
- 26. The most perfect training of the crews in all branches of the service, especially by all kinds of torpedo and gun practice, as nearly as possible under war conditions, is the foundation of success. As I said in Part IV of this work, nothing should be left undone to attain the greatest perfection possible in time of peace. No expense should be spared to enable those who bear the responsibility of the battle—the chiefs of fleets and squadrons, as well as all commanders—thoroughly to test the actual degree of efficiency of their crews by practical exercises, resembling as nearly as possible the operations of actual warfare.
- 27. Such exercises will also demonstrate whether the weapons, from a technical standpoint, are equal to all the exigencies of war. I learned, for instance, that the following defects were found to exist in the American artillery matériel:
- (a) Brooklyn.—In the 5.7-centimeter rapid-fire guns cartridges were jammed in several instances. In the 20-centimeter guns the plugs stuck several times. Some of the 12.7-centimeter rapid-fire guns became unserviceable toward the end of the battle because the elevating gear did not function properly, and all these guns had to be supplied with new mounts after the battle.



- (b) Texas.—The two 30.5 centimeter guns had been fired several times across the deck, considerably damaging the latter. A suggestion made in time of peace that the guns be tested in that respect had not been followed out.
- (c) Iowa.—On this ship, also, the deck had been damaged by the firing of the heavy guns. The training gear of the 20-centimeter guns had not been able to sustain the firing at great elevation.

The most careful examination of the artillery matériel in time of peace is absolutely necessary. Even when the strictest requirements are made and fulfilled in testing the guns, it is no guarantee that the matériel will not in the course of time show defects on board ship. In order that such defects may not remain hidden, to become apparent only when the guns are used in actual war, at least part of the target practice should be held with full service charges.

VII. THE OCCUPATION OF PUERTO RICO.

1. In my first visit to San Juan de Puerto Rico (see Part III of the Sketches), I found there, to my great astonishment, a comparatively large German colony. I learned that in all the principal towns on the island, such as Ponce, Mayaguez, Aguadilla, and Arecibo, Germans are likewise settled, and in the possession of large business houses, enjoy the esteem of the Spaniards as well as of the Puerto Ricans. Under these circumstances it appeared necessary to send thither a war ship for the protection of the Germans when the Government of the United States commenced action against Puerto Rico. I have successively visited the harbors of Mayaguez, Ponce, and San Juan. The first two were already occupied by the Americans, while the third city was still in the hands of the Spaniards. On the 13th of August it became known that peace negotiations had commenced, and hostilities ceased.

No great battles were fought in this campaign; only a few minor skirmishes took place. But the American troops were marched up in such a simple and skillful manner that the operations are not without interest. Moreover, our readers will be glad to learn some particulars about this beautiful island, in which these many years German merchants, mostly from Hamburg and Bremen, have exerted their best energy in steady, unremitting toil, and which now, as the price of victory, falls into the lap of the United States.

2. The accompanying map of the island is the latest and best published. It shows the different departments, so that a description is not necessary. All the turnpikes and roads which are to be considered in connection with the advance of the American troops, as well as the railroad skirting the coast, are also indicated on the map. The mountain range which extends nearly parallel to the southern coast from Adjuntas to Cayey is, on an average, not over 1,000 meters high, and from both towns is continued in several spurs to the eastward and westward. This range constitutes a weather barrier, as the fresh northeast trades cool the northern part of the island and provide

abundant rains, while in the southern part of the island the mountains prevent this moderation, and the heat often becomes unbearable. Numerous streams water the fertile soil, which in former years produced mainly sugar, but now also coffee, tobacco, and bananas, and furnish large areas of magnificent pastures. The number of inhabitants in round numbers is 800,000. The area of Puerto Rico is about onetenth that of Cuba, which has hardly 1,500,000 inhabitants. The whole island of Puerto Rico is inhabited. There are no extensive uncultivated stretches, as in Cuba. Still, much remains to be done to obtain better yields than heretofore from the rich and fertile soil. In the first place, the agricultural methods should be improved, better communication established with the coast, and, finally, the mineral treasures of the island exploited. In this latter direction hardly anything has been done. As far as the social conditions of the island are concerned, it has been spared the serious disorders that have been raging in Cuba during the last few decades. The Spanish, by means of military posts distributed all over the island, and especially the Guardia Civil, an excellent police system, have succeeded in maintaining order and safety throughout the country. There have been minor disturbances. it is true; but at no time has there been an actual rebellion against the Spanish Government, such as was spoken of at the beginning of the Spanish-American war. Nevertheless, there has gradually developed among the Puerto Ricans an intense hatred toward the selfish Spanish administration, and with open arms they received the Americans who came as liberators from the Spanish yoke.

3. The general opinion, reinforced by the United States press, was that the troops would land east of San Juan, probably at Tajardo. General Miles was the only one who was informed as to the landing place selected, and he left Guantanamo on July 21, with the auxiliary cruiser Yale and seven transports with about 3,500 men. The battle-ship Massachusetts, the cruiser Columbia, and six small gunboats and auxiliary cruisers, among them the Dixie, Annapolis, and Gloucester, accompanied the transport fleet. Upon reaching Mona Passage the fleet headed for the southern coast of Puerto Rico, and on July 25, the troops were landed at Guanica without encountering serious resistance. The very next day, after a short fight with the Spanish, Yauco, which controls the railway to Ponce, was occupied.

In July 27, the Dixie, Annapolis, and several other vessels appeared in front of Ponce and demanded the surrender of the city. The United States general granted time until the next morning, and told the commander of the city that unless the surrender had taken place by that time he should at once proceed to bombard the city, and land his men. Captain-General Macias, at San Juan, had given the commander strict orders to defend the city to the utmost, but the combined efforts of the foreign consuls prevailed upon Colonel San Martin to agree to the surrender of the city on condition that the Spanish troops would not be pursued for forty-eight hours. This agreement, however, of which the

United States commander had already been notified, was declared null and void by Captain-General Macias, who at the same time discharged Colonel San Martin from office, and it was only due to the energetic efforts of the German and British consuls that the captain-general became convinced of the necessity of surrendering, and finally consented to the evacuation of the city. Thus the Americans took possession of Ponce at 6 a.m. on July 28, without loss of life or injury to property, and on July 29, they landed a large division of troops, consisting of from 5,000 to 6,000 men, with artillery and wagons. On August 1, two vessels occupied Arroyo, where about 3,000 men were landed.

- 4. Thus the Americans in a short space of time had gained possession of the three principal harbors on the southern coast of Puerto Rico without firing a single shot. They owe this first of all to the friendly disposition of the population and the lack of energy of the Spanish officers, who did not dare offer any resistance. General Miles's subsequent plan of campaign is self-evident. The troops landed at Arroyo were to advance upon Guayama, thence to Cayey, which lies on the main road to San Juan. The fighting forces at Ponce were also to advance upon Cayey by way of Juana Diaz, Coamo, and Aibonito. The troops at Guanica were to advance by way of Yauco, San German, and Hormigueros, and occupy first Mayaguez, then Aguadilla and Arecibo. A glance at the map will show that this plan would compel the Spanish forces, in order not to be cut off, to retreat to San Juan. When all the United States forces had been concentrated at San Juan, they were to surround the city, supported by the blockading fleet, and it was here that the decisive blow was to fall.
- 5. General Miles's plan of campaign was carried out as intended. On August 8 General Schwan advanced from Yauco upon San German. At Hormigueros they were opposed by the Spanish, who with 1,000 men occupied an excellent position; but as soon as the American artillery was lined up and the American lines advanced the Spanish evacuated the heights and retreated. On August 11 General Schwan took possession of the town of Mayaguez, which had been evacuated by the Spanish, and met with a hearty reception from the inhabitants. The American troops pursued the Spanish and succeeded in surprising them on August 12 at Las Marias. The Spanish troops were resting, without any special measures of precaution, on the bank of the Guasio River, when the Americans were discerned on the heights. As the river was very high from recent heavy rains, the Spanish had difficulty in crossing it. The American commander demanded their surrender; but it seems that the Spanish had opened fire, thereby compelling the Americans to answer with their artillery. This caused great confusion in the Spanish lines. Two companies only succeeded in crossing the river, the others had to surrender. The Spanish had 40 killed and wounded. Among the many prisoners who were taken to Mayaguez were several colonels and captains.

On August 4 the main body of the troops advanced on the excellent road from Juana Diaz, a small town about 25 kilometers from Ponce. On August 9 they took Coamo, which the Spanish were holding with a force of about 1,000 men. The fight lasted five hours, and ended in the evacuation by the Spanish, as the Americans had succeeded in going around the enemy's flank. The Spanish had 15 killed, among them the commander in chief and and several officers. About 150 were taken prisoners. The Americans had 7 wounded. The Spanish retreated to Aibonito, where they intrenched themselves in a fortified position. They were not effectively attacked here, because hostilities were suspended about that time.

The third division of the American troops had advanced from Arroyo and taken Guayama on August 5. On August 8, while advancing toward Cayey, the Americans had a slight engagement with the enemy intrenched in a fortified position, ending in the retreat of the latter. But the American troops had to return to Guayama, because they did not consider themselves strong enough to accomplish the task set them—viz, to advance as far as Cayey. When, on August 12, the Americans started a second time, they found the Spanish in the same fortified position. No fight took place, because the news arrived that peace negotiations had been entered into.

6. According to the census of January 1, 1898, the Spanish had the following troops in the different departments:

ARMY.

	Generals.	Com- manders.	Officers.	Men.	Total.
San JuanArecibo		39	136	2, 217 253	2, 394 269
Aguadilla		2 3	13 51	313 1, 101	328 1, 155
Ponce Guayama Numacao		4	51 44 16	1, 317 997 320	1, 373 1, 045 337
Vieques		56	330	6, 614	7, 002

NAVY.

	Admirals.	Com- manders.	Officers.	Sailors, mechanics, and fire- men.	Marine infantry.	Total.
San Juan Arecibo Agnadilla Mayaguez Ponce Guayama Numacao Vieques		1 1	20 1 1 1	287 3 2 4 5 2 4 1	22	339 4 3 5 6 3 6 2
Total	1	11	26	308	22	368

The volunteers have not been included, because, with very few exceptions, they laid down their arms as soon as the Americans landed in Puerto Rico.

7. In Puerto Rico, as well as in Cuba, no plans had been made for concentrating the troops at the beginning of the war. The fighting forces were so small that landings of the enemy at any point on the coast could not be impeded. The troops, by remaining in their different departments, might find themselves under the necessity of having to fight far superior hostile forces, and finally to retreat within sight of the enemy in order not to be cut off. The best plan would have been to concentrate all the troops in a fortified position near Cayey, keeping up retrograde communication with San Juan. If the enemy had landed east or west of San Juan, it would have been easy, in view of the good road, to effect a change of front or for the whole force to retreat to San Juan, which was the most important point of the Spanish. If that city had been defended by 7,000 men, it could have resisted the enemy for a long time. It is true, however, that without the prospect of assistance from the Navy, the final surrender of the city, as the result either of the harbor being forced by the enemy or of starvation, would have been only a question of time.

8. At the time of our arrival at Mayaguez hostilities had just been suspended. General Schwan had taken charge of the administration of the department. The inhabitants were entirely satisfied with the new order of things, but many families were mourning the fatal defeat of the Spanish troops at Las Marias. The prisoners taken by the Americans had been quartered in the barracks and were being strictly guarded. We had to abandon our attempt to inspect the scene of the battle because the road, owing to recent rains, was in very bad condition and obstructed by the numerous baggage carts of the American troops. But in order to gain at least an idea of the immediate surroundings of Mayaguez, I drove to Hormigueros, where the first engagement had taken place between American and Spanish troops. A well-kept road follows the coast over almost level ground, passing through several small hamlets. Soon the scenery changes. Cane fields resplendent in their fresh verdure are seen in every direction, and beautiful hills closely covered with banana palms and coffee trees appear before our eves and gradually rise higher and higher.

In the distance the river may be seen, crossed by a number of iron bridges, over which the railroad passes that runs along the river. The road rises very gradually, and after we had passed over the top of the range of hills we saw at our feet the pretty town of Hormigueros. At its highest point stands the church from which one must gain a magnificent view over the whole region. We went there, and after mounting the stone steps into the belfry, we saw before our eyes a panorama of indescribable loveliness. Indeed, a better point could hardly be found from which to gain an idea of the exquisite beauty of Puerto

Rico. Far as the eye can see stretch the picturesque ranges of hills clad in the loveliest green; at their feet a few scattered cottages and small hamlets, and glistening streams winding their way through But we could not allow our eyes to be completely captivated by the natural charms of the country. We had also to satisfy our military curiosity. One thing became evident at a glance, namely, that the church was the best tactical point of the whole region, as all the different positions could be observed from there. The Spanish commander in chief appears to have realized this circumstance; for, as the kindly priest of the church told us, it had been his intention to occupy the church and line up his artillery on the adjoining hill; but the priest had succeeded in dissuading the commander from this plan, which would surely have entailed the destruction of the church and town. Probably no serious resistance had been planned by the Spanish, and they were therefore only occupying the range of hills between which a defile leads to the town of Mayaguez, to which the troops retreated as soon as the Americans commenced to advance after the first few volleys. In the little town of Hormigueros peace and quiet were reigning. The Americans had already appointed a mayor. A few families from Mayaguez had come hither to await further developments. On my return to Mayaguez I had an opportunity of inspecting a company of United States volunteers. They were nearly all tall, robust men, most of them with healthy complexions and of good military bearing. the volunteers were equipped with Krag-Jörgensen rifles.

₹9. On August 16 we left the harbor of Mayaguez and steamed to Ponce, where we arrived in the evening of the same day. The harbor was crowded with American war ships, auxiliary cruisers, and transports; but as a result of the peace negotiations, many of the war ships had received orders to return to Guantanamo or to proceed to the United States, so that the harbor was considerably cleared during the next few days. General Gilmore, in the absence of General Miles, who was then at Coamo, had established the headquarters of his staff at the custom-house. The United States garrison was encamped near the harbor on both sides of the main road leading to Ponce. The camp consisted of ordinary tents, with camp beds raised a few feet above the ground. As it always rained several hours during the day and usually all night long, one may easily imagine the condition of this camp. Men were constantly at work digging new drains for the water. At times the guards and patrols surrounding the camp had to wade in the mud up to their knees. It is a wonder that there was not more sickness in the camp, for the American general told me there were only a few cases of malarial fever. But exposure to the burning rays of the sun, to constant rains, and the exhalations of the soil is extremely dangerous in this climate, as the residents know only too well, and can not fail but have its injurious effects sooner or later. As a matter of fact, many cases of fever have subsequently developed among the



American troops. I can not understand why the military authorities had not exercised greater care. Would it not have been better to send the troops to Coamo, which is located on much higher ground, leaving only a small garrison at Ponce? Such a garrison would have been quite sufficient for the protection of the latter town, and might have been quartered in public buildings, such as the church, the theater, etc. The United States transport steamers are said to have had on board all the material necessary for the construction of a small shipyard. If it is true that they carried their preparation to that extent, then better provisions should also have been made for taking care of human lives. If it was not deemed advisable to quarter the men in the towns, then corrugated tin barracks should have been taken along, which can be taken apart and speedily erected on piles driven into the ground. Ordinary tents were certainly inadequate.

10. On one of the following days we made an excursion to the vicinity of Coamo, about 30 kilometers from Ponce. The beautiful wide road extending all the way to San Juan is a true work of art, and makes it possible to advance rapidly. The whole distance from Ponce to San Juan, about 135 kilometers, can be made in vehicles, by changing the horses twice, in fourteen to sixteen hours. The rise is very gradual. On both sides are small huts of natives with corrugated tin roofs, or covered simply with palm leaves and built on piles about 1 meter high. Soon we came out upon the open country, where wooded hills and valleys alternated with coffee plantations and banana and sugar-cane fields. The profuse tropical vegetation, especially the slender palms with their magnificent crowns, is a constant delight to the eye. After the rain, which had been falling all through the preceding night, the foliage was particularly green and fresh and the shady road nearly free from dust. In several places the road is crossed by the river, which can usually be forded. Where it is too rapid bridges have been built. Upon reaching Juano Diaz the landscape becomes even more beautiful. The heights afford a splendid view of the whole region from the coast to the high mountain range. At Coamo we left the main road and soon reached a beautiful valley made famous by the "Baños de Coamo." There is a large hotel for the accommodation of visitors. The bathing establishment also is very conveniently arranged. A natural spring furnishes sulphur baths. The only thing that reminded us of war during our trip were a few squads of American cavalry and long trains of wagons, each drawn by six mules, which were taking the necessary supplies to the troops encamped at Aibonito. From what we could learn, it seems that the American authorities were preserving excellent order and safety at Ponce and vicinity, but the Puerto Rican inhabitants showed their hatred for the Spanish so openly that in spite of the strict measures taken by the Americans there is danger of demonstrations by the inhabitants in that direction.

11. On August 23 we made a second visit to San Juan. The mines

in the entrance had been removed and the channel was marked by buoys in the usual manner. Besides the Spanish gunboats Isabel II, General Conche, Creola, and Ponce de Leon, and the torpedo-boat destroyer Terror, there were neither war nor merchant vessels in the harbor. The city itself presented the same aspect as before the blockade. It was not until the latter part of August that steamers arrived and commerce and traffic were reestablished. I took advantage of our presence there to learn further particulars about the engagement between the torpedo-boat destroyer Terror and the United States auxiliary cruiser St. Paul. The commander of the Terror gave me the following account of the battle:

At 9 a. m. on June 22 the lookout at the fort signaled a suspicious vessel. The commander gave orders for the Isabel II to go out to reconnoiter and for the Terror to be ready for action. By 11.30 the vessel had come closer and the Isabel II went out. Upon sighting her, the hostile cruiser immediately hoisted her flag and waited. The Isabel II opened fire on the foe. The destroyer then received orders to go out and assist the Isabel. The Terror, which had been left by her fleet at Martinique, had not been able to recover her guns and ammunition, which during the voyage had been transferred to the Maria Teresa in order to make room for coal. The Terror therefore had no other weapons than her torpedoes and two 57-millimeter guns with little ammunition. The Isabel fought the St. Paul at a distance of from 10,000 to 12,000 meters. As the utmost range of our guns was only 4,000 meters, we could not assist the Isabel by going closer to her. I therefore gave orders to head the Terror east, so as not to interfere with the Isabel firing north on the enemy. When we were sufficiently clear of her and had the open sea before us, I headed straight for the St. Paul at a speed of from 20 to 21 knots.

The enemy, who hitherto had been firing on the Isabel, now directed upon us the well-aimed rapid fire of both her batteries, the lower one of which appeared to have eight, the upper one ten to twelve guns. At 4,000 meters we opened fire with our guns, in order to keep up the spirit of the crew during the long interval between the beginning of the hail of projectiles and the launching of the torpedo. Our fire was very accurate. At the first shot we saw the shell explode on the stern. Several other shots also hit their target, and our men were wild with joy. We had approached to within 1,200 meters and were about to launch the torpedo when the Terror commenced to veer to starboard. I had the helm shifted to port, but the ship kept on turning. Then I ordered the port engine stopped, and still the ship continued to turn to starboard. I then learned that a shell had exploded on deck and destroyed the leads to the steering gear and telegraph, so that the vessel followed the movements of the screw and was unmanageable. The hand-steering gear was at once put in operation; but as we passed the enemy at such close range, several projectiles hit us, one of them passing through the port side into the engine room, where it burst. The engine room became flooded and the engine appeared to have been disabled. We just managed to steam into the harbor.

From an inspection of the *Terror* it appeared that the fatal shell, ranging obliquely downward, had passed through the ship's side, torn off a steam gauge, killed three men, and struck the lower edge of the main steam pipe, tearing off its covering. This had deflected the shell, and it had passed out through the starboard side. It was through the hole made by the projectile in passing out that the engine room had been flooded up to the lower edge of the steam cylinder; but the engines continued to run, so that the *Terror*, though with gradually

slackened speed, was able to reach the harbor under her own steam. The shortest distance between the *Terror* and the *St. Paul* had been 800 meters. The gunboat *Isabel II*, I was told by her commander, had not gone closer than within 6,000 meters of the enemy.

- 12. We then visited the fortification works and made the following observations, which may be considered as a supplement to the description of the bombardments contained in Part III of these Sketches:
- (a) Morro Castle.—On the highest terrace are three 15-centimeter Ordoñez guns of 30 calibers length and two 24-centimeter breech-loading howitzers of modern type; direction of fire northwest to west. On the next lower terrace are two 15-centimeter Ordoñez guns. These are all the guns that had been mounted. No guns were dismounted during the bombardments. The walls of the fort are over 6 meters thick and extremely solid. They show many hits of heavy, medium, and light artillery. The heavy projectiles had entered the walls to the depth of 2 meters and torn large pieces out of the masonry work. The smaller projectiles had done very little damage, which had already been repaired. One shell had struck the corner of the wall on the lower terrace and killed two of the men serving the guns and wounded several others by shell fragments and débris.
- (b) Cristobal Castle.—Two 15-centimeter Ordoñez guns of 30 calibers length, trained north, fired about eighty rounds during the bombardment. A little to the rear are three 24-centimeter breech-loading howitzers of modern type. At one of these an enfilading shot passing over Morro Castle had struck the breech and killed one man. As a result of this accidental hit, and to protect the men serving the farther guns against shell fire and débris, earth traverses had been thrown up between the guns after the battle. A little further back and to the east three 15-centimeter guns, with an arc of fire north by way of east to southwest, and hence also adapted to fire on the land, were mounted on central-pivot carriages. These took part in the fight with about thirty rounds. Finally, at the Princesa Battery, adjoining Cristobal Castle on the east, there are four more 15-centimeter guns and two 24-centimeter howitzers. Cristobal Castle and the Princesa Battery sustained only a few hits, slightly damaging the outer walls.
- (c) The howitzer and gun batteries of the harbor entrance show no serious injuries. Morro Castle appears to have been the main object of the American fire. The fact that many shells did not explode has been much commented upon.
- (d) Besides the fortifications mentioned above, the Spanish had erected a new battery at Escambron, with three 24-centimeter howitzers of modern type in central-pivot mounts, for indirect fire. For land defense a series of earthworks had been erected near San Antonio and armed with mortars and bronze guns.
- 13. As we left Morro Castle Spanish soldiers were engaged in taking down the shield with the Spanish coat of arms over the main

entrance. As the remains of the ever-glorious Columbus had been removed from the cathedral at Havana, where they had a beautiful and well-cared-for resting place, so it was also desired to carry to Spain this escutcheon which for centuries had been the witness of the victories and greatness of the Spanish nation. When both of these—the remains of the man to whom the whole world owes so much and the emblem of Spanish power—reach Spain there will be profound sadness throughout the whole country over the final loss of its colonies. The history of this short struggle is another example of the instability of power and fame in the ever-changing destinies of the nations of the earth!







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